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ORBIT 41

Robert M. Brooks

It was with sorrow that we heard of the death of Bob Brooks — on December 31, following a heart attack.

Aged 39, Bob was one of the youngest principals in the Toronto school system; he was appointed principal of Malvern Collegiate last September. For the past two years he served on *Orbit*'s consultant panel, making a number of useful contributions to the journal. For example, Grace Irwin's article on the adjacent page stemmed from a suggestion of his.

We extend our deepest sympathy to his wife and children.

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Where Have All the Latin Teachers Gone?

Grace Irwin

To begin with suitable jargon, the 'operative word' in this title is Latin, especially as an attributive adjective. Not 'teachers of Latin' as one might say teachers of Hindustani or teachers of Industrial Arts or teachers of Computer Science. The Latin is inseparable from the teacher, the teacher, qua teacher, from the subject taught. He (generic pronoun) is instinct with it; the tincture colors his personality. Therefore the difficulty of my assignment. How can a Latin teacher cease to be a Latin teacher, become anything else? Something in addition perhaps? My Latin teacher taught us Ancient History. Earlier in his distinguished career, as principal of a small-town high school (Waterdown), he had taught Algebra and Greek to a future brilliant university mathematician. But Latin teacher, first, last, and always, the late J.H. Mills was.

In my own case, the subject dictated the choice of profession. Unattracted to the latter, I entered it for the sake of Latin. In other words, I became what I had no desire to be, and had vowed never to become, a teacher, in order to teach Latin; because, by chance and with surprise, I had discovered the joy of being able to impart what had been so joyfully imbibed.

For longer or shorter periods I — perforce and to the best of my ability — taught other subjects: Greek with equal delight but in such special conditions that teaching was a different exercise; English, Ancient History. But — and to the Classics I owe my unrepentant boldness in so beginning a sentence — I believed, during my thirty-nine years with all sorts and conditions of Latin classes, mostly ungraded and compulsory, that I was rendering to Ontario education the superlatively important service, the irreplaceable favor. My conviction never wavered that learning Latin, little or much, provided foundation for the Romance languages (French, Spanish, Italian, Rumanian, Romansh), preparation for any inflected language, training in precision and clarity of thought, essential illumination for the richly textured manuscript of English literature. During those by-no-means easy years I often doubted my own efficiency, my students' ability; never the value, practical and aesthetic, of my subject.

With this understood, there can be little question concerning my opinion of educational trends over the last ten years in

Ontario, a subject on which—alas—I shall never be invited to write an article, much less to share in a panel discussion. But even before 1967 certain attitudes towards the Latin course, as then constituted, permeated the thinking of some teachers and did inestimable damage to our claims for the study of the language as unique and without alternative. (Note: I did not say 'viable' alternative!) These criticisms had the speciousness of half-truth. And, if I dare quote Tennyson in so avant-garde a publication, 'A lie that is half a truth is a harder matter to fight.'

For example: Rote memorization is a Bad Thing, therefore let us have no memorization. The multiplication table, work in English literature, even the alphabet had gone; why not declensions, why not all paradigms?

Grammar is a Bad Thing; corollary: there are no mistakes in grammar. After all, isn't a language what the common people make of it? This statement, followed to its own conclusion — and believe me, we are following it — abolishes standards, makes the lowest common denominator the norm, of music, drama, ethics, manners.

'Facts are unimportant'; discussion, expression of opinion is of paramount value; so students express opinions without basis, or burden of proof, like children invited but not really expected to assemble a jigsaw puzzle without a glimpse of the picture to be constructed.

Quibus de causis, Latin grammar was played down to the obliteration point, Latin composition was also minimized until in some cases it disappeared from the course altogether. There was 'no value' in looking up vocabulary. (No? Not in selecting, from six to sixteen possibilities, the only correct, the precise meaning for a particular place?) So vocabulary sheets were mimeographed and handed out, the actual form and the applicable meaning alone given for each occurrence. This crutch—or rather escalator—to instant translation not only diminished any latent saving urge to remember the word but made such recall a drawback, since it might occur in the next encounter with a strikingly different form, a startlingly different meaning, and no intermediary ramifications to explain the apparent illogicality. For example, what but arbitrary whim, thinks a student (if it occurs to him to think), makes the same word translatable in line 384 'lives in' and in 672 'worships'? Or what possible link is there between 'tollit' p. 9 and 'sublatus erat' p. 11? So the student was denied an etymological discovery and an introduction to psychology.

Worst of all, in this stupid well-meaning betrayal of quality in education, translation itself, as a valuable delicate irreplaceable skill, was decried if not denied. What really matters is the content of the classical writings. (By the same token Lamb's Tales may be studied in preference to Shakespeare's plays. And a student of Chaucer is one who thinks that The Canterbury Tales begins prosily: When April with her sweet showers has penetrated, and so on. As for Buffon's dictum 'Le style c'est l'homme'—who *was* Buffon anyway? And what is style?) But did no one notice that such heresy not only gives the coup de grace to the teaching of Latin but — who minds shifting a metaphor?—puts the ball neatly in the court of the teacher of English? For all Latin authors are now available in good English (at least as good as the rest of the modern English course) and anyone able to teach English, therefore syllogistically anyone, can teach a course in 'Latin or Classical authors in Translation.' Sic transit—sic traditur—gloria.

What is this article supposed to be about? says my reader at this point, glancing back at the title. Ah yes. Revenons à nos moutons!

Where are all the Latin teachers? Statistics (a word I never use without the comforting cliché: There are lies, damned lies, and statistics) are not easy to come by. In round figures, the number of students studying Upper School Latin dropped to one-seventh over eight years. The overall number dropped one-third between '72 and '75. There were no available figures for the number or location or size of the schools in which the study is now offered. Still speaking roundly — for classes must now be of a certain size to earn a place on the timetable—it would appear that six out of seven teachers of a decade ago are unable to teach their subject. Where are they now?

A goodly number — obviously of my vintage, but also many in the succeeding generation who could make it to an A or even a B pension — have unregretfully retired. That in itself—early retiring without regret, in fact with blatant rejoicing, and amid the envious congratulations of still-working colleagues—should, but is unlikely to, cause concern and soul-searching among our impervious education-experts. For it was not always so. Our attitude, well on through most of my teaching experience, towards those compelled to retire was one of pity. We invited them back; we rallied around them when they dropped in at the school with that singularly lost look of those who no longer have part and lot in the matter; we tried to make them feel welcome, before we hurried off to class, protesting, but with the sense of importance which goes with belonging. The hardier retirees were in demand at cram colleges like Meisterschaft; several of my colleagues taught in the University of Toronto; three classical masters had a second retirement from the College of Education. Why is this yearning to teach, this unwillingness to remain outside an academic environment, now missing? Money, says the cynic, better pensions, chartered trips. Yet the colleagues of whom I speak were comfortably off and free of family responsibilities. Nor were they the covetous type. Is it perhaps that today the teacher seldom finds it possible to teach? That the atmosphere has ceased to be academic? That the warm ties which used to bind colleagues in and to their profession have chilled to a union association? That the long tenure which made a teacher part of his school has been discouraged by the administration, so that the 'best,' or at least the ambitious, teachers are constantly on the move and no one school takes pride in them or they in it?

Back to the Latin teachers! In addition to the 'graduands' whose increase in unnecessary numbers caused my last digression, others — the names are omitted to protect the innocent — have moved into the Department, into Teachers' Colleges (now alas! to be again redundant), into Principal- and Vice-Principal-ships within the system. Some are using their ability and knowledge in the business world. I know one, a Senior Editor in book publishing. Some have found congenial work in their own subject in private schools, which now cater to quality as they once catered to wealth. Some, seeing the shape of things to come, took courses in Guidance and ably head that cancerous department in their school. Still others have designed, and are offering, courses entitled Classical Civilization, with extensive or in-depth (save the mark!) pursuit of such topics as Slavery, The Place of Woman, Art and Architecture, Religion.

Many of the younger group — those who obtained positions before the bottom fell out of Teachers' Paradise (and out of the justifiable pride of Toronto University, her Honours Courses) had specialized at university, or at the College of Education, in a second subject: French, English, Spanish, Physical Education, Theatre Arts. These are teaching that subject exclusively or with a class or two of Latin.

But there are some who are — miraculously — alive and — doggedly — well and living in Ontario: these few who bend but do not break are still teaching Latin, and even bootlegging Greek. These are unfortunately — because of the aforementioned whimsicality of administrative appointments — dependent upon local administration. In schools where the principal is an educator, not an educationalist, where a vice-principal has been grounded in the humanities and/or has some concept of the purpose and possibility of education as opposed to training, where the top brass is not afraid to withstand pressure and to encourage the dedicated Latin teacher, the democratic ideal persists: that is, in the public system a child who wishes to study Latin is given the same consideration as one who elects Barbering, or Urban Development, replete with field trips.

These teachers, acting on the motto 'Ex unitate vires,' meet their university confreres and exchange ideas with them at the meetings of the Ontario Classical Association and the Classical Association of Canada. They have revived the ancient and honorable Toronto Classics Club and the attendance at its meetings is large and overbalanced on the side of youth — a very different assembly from the gaggle of sage and hoary professors of my earlier days. The high school teachers bring interested students to be enlightened on conditions in Ancient Alexandria, to hear illustrated lectures on coinage, or on the history of the Olympics. Their attitude on such occasions is buoyant and if they do not drink to Illa Dies (yes, yes, you were taught dies as masculine; only the classicist knows its feminine significance) they feel in their most optimistic moments that it will come, that day of the return of Latin to its proper place in the system. They hope, and I hope, that it will come while some well-educated are still able to teach; before everyone believes that A.D. means After Death; while there is someone to explain the meaning of i.e., e.g., Q.E.D., a.m., to say what comes after status quo; before everyone thinks that media (like phenomena) is a singular, and that medium has to do only with height and spiritualism.

Individually such a teacher's lot is not an altogether happy one. He is forced to the indignity of advertising and selling a subject, instruction in which by an expert is a privilege. He must lower his standards to a level undreamed of before in Ontario education; for, if the marks in Latin are lower than in subjects which are non-cumulative and unexacting, the student is betrayed with a lowered average and a lowered opportunity of university acceptance. Still, the subject is there. The fire glows and throws out sparks and the answering light in a pupil's eye is, as always, a reward. So some avert Richard Le Gallienne's grim prediction made when, over fifty years ago, Latin was first made optional in an English College.

'. . . Eyeless hordes
Trample fair Learning in the dust
And mud is crowned the Lord of lords.'

For in those classes, I venture to say from experience, there is still fun and discovery and the good feeling of studying something to get one's teeth into, something with a great corporate past, something which has shaped the present, something which can influence the individual future. 'Abeunt Studia in Mores,' my college motto, might as well be in hieroglyphics for the next generation of Victoria students; but Erasmus's borrowing from Ancient Roman is still terrifyingly true. What we study — what we are keen on — does go into the making of our character.

With high-school memories going back half a century, the ingredients I miss most in those institutions today are, paradoxically, a sense of fun and a feeling of mutual concern. Individual absorption, remote 'involvement' in distant causes, shallow cynicism, bitterness, iconoclasm, even despair: these are more evident than the light-hearted hilarity of friendly groups I knew. And what wonder? the reader asks indignantly. Consider the world today! I do. (My high-school memories encompass, remember, the troubled early Twenties, the hungry Thirties, the Second World War.) But our education gave us perspective. These youngsters are cut off from the past. They are denied the calming encouragement, the enlargement of sympathy, the *sursum corda,* which comes from acquaintance with those of like nature who, millennia earlier, survived similar difficulties or rose above similar agonies. Meeting oneself, mutatis mutandis, in Ovid, in Virgil, in Horace, in Cicero, in Livy, even under guidance in Caesar, is a saving antidote to the 'Now' philosophy.

'I went to the Classical Master, though,' said the Gryphon (who hadn't had time to learn Drawling, Stretching, and Fainting in Coils). 'He was an old crab, he was.'

'I never went to him,' the Mock Turtle said with a sigh. 'He taught Laughing and Grief, they used to say.'

Laughing and Grief. Literature and experience are redolent with recollection of the old crabs who taught them. Does the value of what they imparted make the term an affectionate tribute? But are they a vanishing race? If so, we cannot calculate the loss.

Note:
Grace Irwin taught at Humberside Collegiate Institute in Toronto for almost forty years. She is also one of Canada's foremost novelists.

Three articles on gifted children are featured in this issue. Public interest in the gifted has risen, as is evidenced by dozens of articles in professional and popular publications in recent years. In a world of dwindling resources, the idea of waste arouses a sense of outrage. Giftedness should not be wasted. We would be happy to have readers' comments.

Education of the Gifted

Helen M. Woodliffe
Consultant, Etobicoke Board of Education

Some fifty years ago, since concern was first expressed that special attention should be given to the education of gifted students, public interest has fluctuated. When it was realized that many with potential ability to contribute to society were failing to complete their education, efforts were made to provide challenging programs. When these programs were viewed as elitist, they were withdrawn.

In the seventies, interest has again arisen. R. T. Trizen (*Phi Delta Kappan*, June 1973) asks, 'Are the gifted coming back?' and, writing a year later, answers yes to his own question. This time, though, the concern is more for the well-being of the gifted student. It is recognized that a *positive self-concept* is related to successful achievement.

There are arguments for and against grouping gifted children. One obvious benefit is to provide a peer group that encourages acceptance. Such grouping, however, is frequently not possible, and the teacher of a heterogeneous class is faced with the task of accommodating a few gifted students. These teachers need an understanding of giftedness and of the characteristics and needs of bright children. With this knowledge, they will be in a position to make more informed decisions in selecting children for testing and in developing curriculum in their classrooms.

Giftedness, of course, is only one feature of the total development. The child may be able to read at an earlier age or to discuss abstract ideas with mature people, but physical or emotional growth may be on a par with that of classmates. Any particular talent will develop or be stunted as the environment allows. If conditions are favorable —if the environment offers acceptance, support, and stimulation—the child's chances of retaining eagerness for learning and the tendency to use creative approaches are good.

There is no typical gifted child; particular talents and social environments give rise to varying personality and achievement patterns. Even in gifted-child groups, wide differences appear. The gifted mathematician may be an average reader; the gifted artist a poor mathematician; the early reader may lack the ability to organize time and materials.

Giftedness comes in many forms. Children gifted in art, science, leadership, social sensitivity, and so on, also need to be identified for programming. Fortunately, research studies indicate not only that individual IQ tests such as the Wechsler and the Binet can identify a high level of abstract intelligence but also that the above-mentioned forms of giftedness correlate to a high degree with intelligence. Therefore the IQ test provides one indicator.

However, gifted children often exhibit other qualities and characteristics, some of which are listed below. It should be recognized that not all of these qualities are present in any one gifted child nor are they the exclusive property of the gifted. Many children have several of these attributes.

Some Characteristics of Gifted Children

- Early facility in reading and language development — often has a mature vocabulary compared to that of his classmates.
- Keen observation—will notice and want to discuss points other children miss.
- The ability to concentrate—stays at a task longer than other children because of keen interest in a topic.
- Ability to relate cause and effect.
- Capacity for abstract thinking.
- Ability to generalize from a set of facts.
- Ability to organize and relate experience.
- Ability to see the elements of a problem.
- Resourcefulness and imagination.
- Tendency to think logically.
- Desire for clarification and exchange of ideas—likes to discuss and can tolerate varying points of view.
- Ability to learn process quickly—but frequently not interested in pursuing the topic until the fundamentals have been mastered.
- Proficiency in music, art, drama, dance.
- A critical, questioning attitude.
- Interest in and enthusiasm for a variety of pursuits—will often have many hobbies.
- Persistence and enthusiasm.
- Sensitivity
- Empathy.

Curriculum Adaptation

It is important to realize that the adaptation of curriculum for gifted students does not mean simply the addition of more and harder work. Instead, the students should be helped to find greater meaning in life. Intellectual challenge should be gained through quality — the addition of breadth and depth to a topic.

Efforts should be aimed at developing self-directedness and independence. Gifted students need the reassurance of knowing what is expected of them. They learn research skills quickly and flourish in an atmosphere that de-emphasises conformity to a narrowly defined pattern. There will be encouragement of original thought and opportunities to work on challenging materials. Teaching them becomes, then, finding a balance between prescription and freedom.

Exposure to a wide background of experience provides material for future projects and discussions. Opportunities for sharing ideas with others of similar interests may be arranged through withdrawal from regular class. Through these meetings, the gifted child gains experience in the evaluation of both his own thinking and others'.

The gifted student needs to be more than a problem-solver—such activities as imaginative thinking, story telling, art, music, drama, and physical activities provide scope for growth.

With accommodation for the mastery of skills and for relating to others who accept them and who can challenge their thinking, gifted students will be helped towards a positive self-image that will lead to the development of their full potential.

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TEACHING THE BRIGHT CHILD

Fred Speed,
Science Teacher, University of Toronto Schools;
General Secretary, Association of Bright Children

Asking a teacher to write an article on an aspect of education is a little like asking a private soldier how the war is going. Like the private, the teacher tends to become very involved with what is happening at his 'front,' but both learn somewhat indirectly of the grand strategies of the generals. Every private has his beefs about the rotten supply line and other matters concerning his survival and every teacher mutters under his breath about the board, the Ministry, or the bandwagons. So, while it is my intention to concern myself chiefly with what I know best, action at the front—the classroom—permit me to air my opinions and present my views on some of the strategies of education.

Gifted or Bright?

Let me begin by saying that I have always been a little uneasy about this term, 'giftedness.' It seems to me that this is one of those terms in the English language which has been stretched in order to cover a poorly defined attribute. In my teaching of both slow and fast learners I have seldom found a youngster without some talent, some gift. May I suggest that the word 'bright' might be a better description than 'gifted'? For one thing, bright seems to arouse less feeling than the word gifted. I think most teachers would feel less threatened with a bright class than they would with a gifted class: the latter smacks of genius. Moreover, most parents and children can grasp the significance of brightness whereas educators and psychologists parade a host of definitions in order to profile the 'gifted' child. To quote one psychologist, Dr. Bruce Whitehouse of the Scarborough Board of Education, speaking at the October Conference on the Gifted: 'While there is some consensus among educators on the characteristics of the gifted child there is no agreement on the most significant of the one hundred and thirteen separate definitions . . . .' At the other extreme is Howard Mountain's definition culled from his own experience as gifted child consultant in the North York system. Howard's one-liner is: 'The gifted child is one who is able to process and absorb information and skills more rapidly than the average child.' This is perhaps an overly simple definition but it happens to fit the ideas expressed by most of the grade 8 UTS (University of Toronto Schools) classes I have quizzed on the subject for the past six years. Straight from the horse's mouth comes the observation that he seemed to be able to learn faster than most kids in his public school classes. This, of course, helps to explain why many bright children confess to being bored at school. I get the same opinions from the grades 6 to 8 children who attend my Toronto Board Saturday morning and summer school classes.

I am not alone in preferring to talk about the 'bright' rather than the 'gifted' child. Educators, administrators, and parents launched a new endeavor four years ago and after much thought decided to call it the Association for Bright Children (ABC). Donald Gutteridge, principal of one of North America's oldest established schools for the gifted, the sixty-eight-year-old University of Toronto Schools, insists on labelling his four hundred and thirty young scholars as academically bright rather than gifted.

Recognizing the Special Needs of the Bright Child

The widely held public viewpoint that bright children will survive no matter how poorly they are taught is surely the most destructive sentiment ever expressed on education and is an argument that is roundly condemned by all workers in the field. Parents of bright children spend their lives telling principals and teachers that their children are bored and underachieving simply because their needs are not met in large classes. This is not the teacher's fault since it is difficult enough to cater to the wide range of abilities in the average classroom, let alone attempt to satisfy the needs of the brighter children. Like the handicapped, the emotionally disturbed, bright children flower when they are recognized, encouraged, and challenged. The Ministry must recognize this need since it places bright children under the care of a special branch, the Department of Special Education. The Ministry of Education has further acknowledged its responsibility to provide adequate education for the bright child by organizing a conference of administrators (the Niagara Conference) and cosponsoring, with ABC, the recent three-day conference in Toronto.

The Conference on the Gifted Child in Toronto mounted internationally known educators, such as Dr. Gallagher and Dr. Dorothy Sisk, and featured sixty workshops run by resource people who demonstrated how the needs of the bright child could be met. Two hundred administrators, principals, teachers, and parents learned much about progress being made in the United States where gifted child programs were concerned. In the keynote address following the Minister of Education Thomas Wells's endorsement of the conference, Dr. Sisk outlined this progress to her audience. In 1972 the Office of Health, Education and Welfare established a central agency that would coordinate talented and gifted child programs under the direction of Hal Lyons. Dr. Sisk, the present director of this agency, told her audience that in 1972 less than 4 per cent of gifted children were receiving adequate education (with 150 minutes per week regarded as the minimum instruction time). Today, five years later, it is estimated that 14 per cent are served. Feeling had been so strong in the last five years that some parents had exercised their rights to due process under Public Law 90-142 in order to demand an 'independent education plan' for their bright children. In the majority of American states, 150 minutes of instruction time within the school week is now mandatory for programs that deal with bright children. Dr. Sisk went on to tell the conference that full-time adequate education for the gifted and talented is now the principal objective of the World Council on the Gifted. Seven countries—United States, Britain, Australia, Bulgaria, Venezuela, Iran, and Israel—have adopted this objective in principle.

Providing Teachers for the Bright Children
Concomitant with the objective of providing full time, adequate education for children with exceptional intellectual abilities is the recommendation which urges adequate training of teachers. The need for specially trained teachers capable of challenging and developing the considerable potential of bright children is now recognized in the United States. These teachers, Dr. Sisk insisted, must receive in-depth education in a subject area in order to operate at the appropriate intellectual level of the older bright children. The teachers must also be fully trained to be diagnostic and prescriptive. Even within the general teacher training program, information should be given which would allow the teachers to identify bright children with special needs. At the moment it would appear that many teachers are unable to recognize exceptionality when it is disguised by poor behavior which, in itself, is the result of boredom.

At this same conference, Dr. Gallagher[1] spoke pessimistically about funds available for research and development. However, it would appear that more was being done south of the border than here in Ontario. For example, Dr. Gallagher indicated that funding for teacher training and special programs is now available from the federal government of the United States. The educational autonomy of the separate states is similar to that of the provinces in Canada. The problem of transferring federal monies to state educational systems at the primary, secondary, and tertiary levels has been overcome by calling such funding technical assistance. It seemed to me that the same device has a precedent here in Canada. Between the wars our federal government was able to supply grants which assisted Ontario in establishing the large technical schools of the major cities. Dr. Gallagher had an interesting comment to make on the methods of training teachers. He felt that techniques *other* than writing books and providing packages must be used to help operating teachers improve their skills because most teachers *do not read*. I have to agree with him. During the post-Sputnik 1 era, 1957–65, a plethora of science programs grew out of involvement of university and high school teachers. These programs were aimed at raising the level of instruction in science in the United States and in Britain. The political interest came from the Russian achievement and, suddenly, money became available for such enrichment programs. For the bright child, these programs were challenging and absorbing. Yet in spite of the millions spent on publications, guide books, kits, and workshops, the expected growth in science graduates did not occur. In fact, the percentage of students studying physics and chemistry in American high schools began to fall. Subsequent reports on this strange phenomenon indicated that in-service training and short workshops programmed for established teachers did not provide the reinforcement that could be obtained by the instruction of new teachers within the faculties of education which had access to innovators and scholars associated with new and challenging programs.

Bright children require bright teachers, maintains Ruth Banks, supervisor of Gifted Child Programmes in the Scarborough Board of Education. In her presentation to educators attending the November conference of the Council for Exceptional Children, Mrs. Banks stressed the importance of the approach, the methods of presentation, of programs for bright children. The approach was even more important than the content, Ruth felt. Yet in spite of this need for capable, widely read and suitably trained teachers in this field of special education, there is little evidence that faculties of education in general are meeting this need. There is one certificate course operated by York University on a summer and part-time basis where enrichment and the teaching of the gifted is included as part of the qualification of a Ministry of Education certification in Special Education. If, due to present budget restrictions, the provincial government, through the Ministry of Education, is unable to assist faculties of education, then I suggest we consider what is being done by our neighbors. In the United States, in-service training for teachers is available at demonstration centres consisting of practice teaching schools. Some centres sponsor mobile units consisting of master teachers, writers, and consultants, which visit independent schools or give presentations to school boards. The cost, apparently, is reasonable. If it is possible to obtain federal funds to aid programs in special education in the same way that funds are being obtained for instruction in French, then we can surely find the resources. London, Ottawa, Hamilton, and Toronto already maintain various programs for exceptionally bright children and their schools can provide facilities similar to those of the American demonstration centres. The University of Toronto is unique in having a school for bright children built into its Faculty of Education. Quite obviously, this school could be put to use where the training of teachers is concerned. Little use is made of the school for the purpose of special education at the moment.

Providing Enrichment for Bright Children
Now that I have made my comments on what I and others feel about the need for adequate education for children destined to be the leaders of a future Canada, I should return to my role as teacher. Here I can speak only for myself, one of twenty-eight members of the faculty of UTS and responsible for instruction in science at the grades 8, 9, and 13 levels.

First, let me give you impressions of the bright child in what is termed a segregated community. Contrary to opinion expressed by many educators in the field, the grouping of bright young people under one roof does not seem to harm them in any way that I can detect. UTS might be described as a community of young scholars. As in other scholarly institutions, there is keen competition and drive to excel. One is aware of the independence of students and the divergence of their thinking. They challenge, and are challenged. The pace of learning is fast simply because the students themselves demand it. Because their interests are wide, teachers are able to expand discussion, seminars, and scientific operations. But, perhaps more important than anything else, these bright children function within a peer group, possess similar interests and, as anyone can witness, it is a happy school. This need for bright children to interact among themselves is recognized by the Toronto Board, which operates a Saturday morning school for selected children, and also by two ABC chapters, who have established Saturday schools in North York and Thornhill.

UTS is a selective entry school. It conducts entrance examinations for grade 6 students which are open to all. Any parent who cannot afford the small, nominal fee can apply for a bursary. This ensures that no bright child who qualifies is prevented from entering the school. Its relatively

small size emphasizes the community aspect but does restrict opportunities to some extent where handicrafts is concerned. Because UTS caters to the needs of students at the junior high and high school levels, it has been able to develop integrated programs which enable it to offer the advanced or academic five-year program in four years. Thus it has abandoned grade thirteen in establishing four levels after grade 8. This structure should be borne in mind when I describe my approach to the teaching of my own specialty, science. For example, grade 7 youngsters are exposed to full laboratory science at the beginning of their schooling in UTS. It is possible, then, to both enrich and to accelerate the work in science. Because of the selective nature of the school, the classes, although large (36), are more or less homogeneous. However, there is a spectrum of ability, aptitude, and interest within each class just as there is in any other school. The all-round 'gifted' child is almost as rare in UTS as in any school and stands out in the same way. But, as I have said earlier, all children are to some extent gifted, some in mathematics, some in languages, some in music. A student who can operate at a high level in science may not operate at as high a level in all other subjects. For the exceptionally capable science student, as for students in other disciplines, a school such as UTS can provide the opportunity for creativity, the chance to excel and move beyond the core program.

Mrs. Banks, supervisor for Gifted Child Programmes in Scarborough, stresses the need for imagination and creativity in programs for bright children, even at the expense of content. This, of course, is true in the elementary school and just as true for the secondary school, but in the latter, content assumes more importance. To some extent all high schools with their elective programs and their academic streaming offer opportunity to the gifted. A laboratory school such as UTS has an advantage over public high schools in that it is independent and can thus provide freedom for its teachers. With such freedom, for example, I have been able to develop what might be termed innovative programs that I feel are tailored to the needs of students who have a wide range of interests.

An Approach to Learning

'Bright children thrive in challenging situations which present an element of risk. Discussion and first-hand experience in the laboratory in contrast to plain teaching encourages such students to go out on a limb.' Thus says Professor Passow of Columbia. I subscribe to this philosophy but find in practice that it applies to perhaps one-quarter of the students in any class. Invariably it is the high-level achievers in science who make up this adventurous quarter, and the rest have to be encouraged to do the same. Science as a questing, probing discipline lends itself well to the presentation of challenge and involvement of the student in self-learning. But although I have the raw material and the requisite subject to teach, I find it is still necessary to let my new classes know that my intent is to let self-learning take place. Once convinced that a teacher means it when he invites students to make their own knowledge claims backed by their own evidence or observations, most of my bright students quickly learn to play this game. But there is a catch here. It is possible to initiate and maintain a wide-ranging discussion based on the background knowledge of students, which sounds great to an associate teacher or to a class visitor. But much of this knowledge I find to be what I term 'skim' information. Probe deeper and the student experiences difficulty in reinforcing his or her ideas, or providing the evidence to back the claims made. Similarly, I found through long experience that while bright children are full of ideas, they often lack, or deliberately avoid, the spadework that has to go into a well organized and well presented project. The bright child, I find, soon tires once his mind has encompassed and understood a problem, even when understanding is incomplete. Thus it is obviously necessary to contrive situations where, having developed experimental and observational skills, the students can make knowledge claims based on solid, first-hand experience rather than hearsay or second-hand information from a newsmagazine. Let me describe one contrived learning situation.

The Guilford Model Applied to Science

Students of curriculum at the Ontario Institute for Studies in Education will know what I mean by the Guilford Model.[2] There are three main components of this model:

1. *There are the operations or processes of thought.* These are the cognitive aspects which demand a good deal of independent thinking in a scientific investigation.
2. *There are the content and materials of thought.* These represent the affective aspect of Bloom's taxonomy. They include the search for evidence, the looking for clues, the analysis and the interpretation of data.
3. *There are the products resulting from the studies.* These are the cognitive, affective, and behavioral components of self-learning where the student is able to build his own knowledge as opposed to obtaining it primarily from a text or from a highly directed experiment. The behavioral aspect of learning is the highest form of learning simply because the student, brought to a stage in learning, is now capable and willing to extend that knowledge. Such a student is of the stuff that researchers are made. To put it in the words of Gallagher:[3] . . .'the gifted child often has the ability to manipulate internally learned symbol systems and in doing so learns without primary reliance on the teacher. Giftedness should mean autonomy for the gifted individual.'

There are many ways to structure a learning situation in which a student comes to appreciate, unconsciously, that science is not mere knowledge or developing skills but rather something that the scientist does. And he can be manipulated to realize that what the scientist does is ask such questions of nature as will yield reliable information (data) which on interpretation and analysis will permit him to construct generalizations (theories) that can be used as tools for expanding man's knowledge. Put simply, and in a way that students even in grades 8 and 9 can understand, this is making knowledge claims based on observations made during an investigation.

The closed system provides what I feel is a good example of a self-learning operation which fulfils the objectives set out in the Guilford Model. The system itself consists of a large bottle which contains water, soil, aquatic plants, pond algae, floating duckweed, and communities of animals such as snails, fish, and small crustaceans and insects. Once equilibrated, or balanced, the system is tightly capped and kept closed for several months. Once or twice a week students in my grade 9 classes spend the first ten minutes of their laboratory period investigating this system. They work in pairs (scientists often work in small teams). They carefully record all observations made (scientists record all data).

Now, of course, it would be folly to expect even the brightest child to know, intuitively, the most effective way to conduct an ongoing investigation that satisfied the objectives outlined in the Guilford Model. There are two roots to the word education: *educo,* to lead out; *educare,* to lead in, then out. I prefer the latter interpretation. I suppose, given enough time, an exceptionally bright child guided by questions and suggestions might formulate the processes of investigation and build new knowledge by discovery. I have a problem of time and thirty-six students. I will call this exercise one of inquiry rather than one of discovery. The students will be guided in skills and techniques as they proceed, but every effort will be made to encourage innovative procedures suggested by the occasional team. Some will lose patience as time goes by and this might prompt a story, film, or videotape about the years of research and the failures which lead to eventual success of a well-known researcher. High-level achievers in the class may notice things the

UTS students investigating a closed system containing water, soil and aquatic plants and animals.

others have missed—Tubifex worms waving their bodies in rhythm above the soil; the emergence of new kinds of microorganisms; water turning greener as the algae, Chlorella, multiply.

If science is learning to do what a scientist does, then bright children who make up a high proportion of research and practising scientists should learn that research is often just that, re-search. No one expects the professional scientist to solve a problem or extend the frontier of knowledge completely on his own. Every researcher spends a considerable amount of time re-searching the literature in his field to find out what other scientists have done and discovered. I tell my students, perhaps too often, that Newton, once asked how it was he knew so much, replied, 'If I have seen more than most men, it is because I have stood on the shoulders of those before me.' It's a good story because it makes the point that science is ongoing, the adding of knowledge on knowledge. It also makes the point that great men are often quite humble; they realize that the more they learn, the more there is to learn. As a story, it sticks. I know this because I am often reminded that I told it to an old student. Therefore, I expect my investigators to do some reading and I provide the materials and tell them I expect to see a bibliography at the end of their report.

Since science is an ongoing process and since its integrity is based on truthful reporting of data, it is an enterprise that demands careful examination of one scientist's work by another. Science posits no irrefutable laws. Theories constantly undergo revision as new tools and techniques reveal new knowledge. The self-examination process demands high accuracy of communication. To this end I establish, early, the ground rules of scientific literacy. All data on the closed system must be recorded. Information should be presented pictorially, by means of graphs or diagrams, so that data can be interpreted by me, the reader. I find it is not unreasonable to insist on written English every bit as good as that which they must submit in essays.

Science is a creative enterprise, with the professional scientist constantly engaged in inventing new procedures or designing new tools to solve a problem. I must recognize that not all my bright students are sufficiently creative to satisfy the third objective in the Guilford Model, or to reach the highest level in Bloom's taxonomy. But there are always a few who demonstrate potential. I have never been disappointed by finding that no one is interested enough to do further work. Genuine research is done year after year by a few students who take off after the project is finished and the report handed in. Research can be carried out on a contract basis whereby the student can offer his effort in lieu of semester tests and assignments. But earning marks this way involves voluntary work after school that tests the student more rigorously than any examination or assignment.

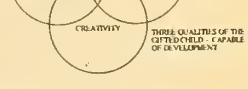
Developing Leadership Qualities

The obvious advantage of developing programs for bright, creative children is that such programs prepare children to assume a future role as society's leaders. My own concern is the development of leadership potential in the field of science, since UTS has few drop-outs and nearly all graduates go on to university. To allow children with exceptional intellectual capabilities to become bored, to become underachievers, and even skilled delinquents, is to cheat society of its effective citizens (to coin Dewey's phrase). We have already learned of a distressing number of bright, capable students who make up a good proportion of high school drop-outs in the Toronto region. Providing our bright children with the opportunity to become responsible leaders is to my mind just as important as developing their cognitive, affective, and behavioral potential. To this end, I have adopted the university practice of using senior students to assist in an instructional and guidance program. The university graduate student plays an important role in undergraduate studies. My Level 4 (grade 13) biology students play an important role as leaders, supervisors, and counsellors in Outdoor Education.

Briefly, the leadership training operation begins with a 'seeding process.' Working with a small group of senior students, it is possible to develop techniques in field survey skills and laboratory skills to some depth. The students, in turn, can train younger students in such skills when they operate as supervisors on site during a week of camping out. With such trained assistance I find that I can conduct an ecological field trip involving more than forty students with only part time assistance of one or two other members or staff. But this is only one aspect of leadership training. Besides functioning as site supervisors and giving guidance to younger students, my senior biology students learn to function in the role of counsellor. Not only does this establish good relations between senior and junior students, it also serves as a learning process for the older students. In teaching their small group of students they soon find that they are learning very effectively themselves. I would not attempt to teach classification and identification of plants and animals cold, as it were. For one thing, there is too much rote learning involved for my independently minded students. But their own anxiety over their role as supervisors provides the motivation to learn how to use flora and fauna in order to classify and identify common plants and animals. Finally, I require my senior biology students to assist me in the evaluation of site reports submitted by the younger students. Having learned by teaching, my teaching assistants now learn by doing. The very process of evaluating and cross-checking the knowledge claims and data of the younger students heightens the interpretive and analytical skills of the markers.

Leadership Program

This seeding process, I have found, works well even with children in grade 7 at UTS. As an experiment, the school launched a summer junior leadership program in Outdoor Education last June. It was an elective program in the sense that parents were asked to pay fees to cover the expense of materials and site fees for the one week spent under canvas, and the youngsters themselves volunteered. Parents and children were told that the program was designed to develop skills and leadership potential that would be useful in more advanced studies in the later grades. The course itself was structured on the Renzulli Model. Dr. Renzulli is professor of Education Psychology and director of the Teaching the Talented Division of the University of Connecticut. He explained this developmental model to a group of parents at an ABC meeting in May of last year. Briefly, Dr. Renzulli considers and attempts to develop three qualities in the gifted child. As his diagram illustrates, these three qualities overlap:


ABILITY AND APTITUDE
TASK COMMITMENT
CREATIVITY
THREE QUALITIES OF THE GIFTED CHILD - CAPABLE OF DEVELOPMENT

On the first day of the junior leadership course I displayed the three-circle diagram and asked the young students to interpret it. The discussion on the first quality, that of ability and aptitude, was open and frank. Should the bright child be reinforced by being told he is gifted? This is a question I am often asked at ABC meetings with parents. My own answer is, yes. After all, it merely confirms what the child senses

and has been hearing from parents and, indirectly, from his peers for some time. Having revealed to the youngsters my intent, that of making the most of their attributes for learning, the discussion went on to consider the second circle, task commitment. This quality is not inherent in every bright child but it can and should be developed, especially in students who are interested in science and intend to pursue scientific studies later in life. There was agreement during the discussion that scientific endeavor calls for painstaking work, patience, careful recording of information, and the ability to organize and present information. To have ability but not to follow through by completing a task is to waste talent. The discussion on creativity occupied the largest part of the discussion. How could they be creative? How were scientists creative? How could creativeness be judged? The students themselves were asked to answer each question and to set their own guidelines.

In the first week of this junior leadership course we spent the time in the laboratory preparing for the week outdoors. Ecological concepts were discussed, scientific literacy was developed by first reading and then discussing the reading. Skills were developed which would enable students to survey pond, river, and woods sites during their week outdoors. Finally, having developed skills and knowledge and applied both in a practical way during the week outdoors, students were encouraged to develop creative projects such as making a super 8 sound movie which involved editing and sound dubbing, making plaster casts of animal footprints, and looking for clues around the area of a fallen tree which could provide information on the way communities of microanimals interact. The pay-off for the kids is that they become the team leaders in outdoor education activities in the next grade. The pay-off for the school is the development of leadership potential.

Encouraging Creative Work through Independent Studies

Most high school science teachers and probably all biology teachers know the name, Paul Brandwein. Among other things he wrote the definitive work in source books for biological investigations. In 1955, as chairman of the science department of New York's Forest Hills School, Dr. Brandwein brought out a book, *The Gifted Student as Future Scientist* (Harcourt Brace, New York). The book made an appeal which Dr. Brandwein has echoed at teacher science conferences all over the world: 'Seek out the bright child, give him a chance to create by spending his imagination on at least one piece of genuine research a year.' Paul Brandwein could not have produced his book at a better time. Within a year of its publication, Russia stunned the United States by launching the first space vehicle, Sputnik I. The effect was immediate and innovation was the key word in revamping science courses. Brandwein's 'operational approach,' pioneered at Forest Hills School, became the model.

UTS students at High Park – on a summer junior leadership program in Outdoor Education.

I don't think it is possible to adopt the Brandwein model using any system of dealing with bright children other than that of the segregated community, such as the Bronx High School of Science established in 1950, Forest Hills School established at about the same time, and the University of Toronto Schools which opened its doors to exceptionally bright students in 1910. Briefly, the system is the one I adopted and have outlined in the preceding unit on leadership training. It consists of structuring a program which begins with the learning of skills, the development of intellectual independence (encouraging knowledge claims), scientific literacy (using the language of science to communicate), knowledge, and organizational ability. Having established the groundwork, the skills, and the knowledge, the high level performers (perhaps one-quarter of a class) are released on a part-time basis to do independent work under minimum supervision and control. This is creative work, if we accept the viewpoint of Paul Torrance who says, 'Creative thinking and operation is the process of becoming sensitive to problems, deficiencies, gaps in knowledge . . . and so on; identifying the difficulty; searching for solutions, making intelligent guesses, formulating hypotheses and communicating results.'

Let me give an example of the way in which the Brandwein, or the 'operational approach,' model can be applied. (I have already described how the closed system can be used to develop self-learning ability in the Guilford Model.) An entire class is involved in this exercise of asking questions of nature, and finding answers by closely observing a system of living things in a large bottle of pond water. Most kids heave a sigh of relief when their joint two-man team report on the system is handed in. They have been encouraged to organize and write creatively and the cost in time and effort has been great. Inevitably, the fish in some of the systems died; not a sign of failure on the part of the team because death is part of the scenario of a community.

Soon after the marked reports are handed back, I suggested that anyone who would like to follow up the work would be encouraged to do so. A number of teams had reported the steady rhythm of vibrating bodies of soil worms and at my suggestion had made tests to determine any relationship between the vibratory rate and the level of dissolved oxygen or carbon dioxide. Sure enough, my really keen potential scientists come forward to ask if they could contract to work on a project involving further work on the system. Their proposals are submitted. One wants to investigate the effects of temperature, light and pH on the vibratory rate of soil worms. Another is bothered by the death of the fish and wants to set up control systems to find out why fish died in some systems and not in others. A third wants to use the videocamera as an extension of the micro-projector in order to make a short videotape on identification of microorganisms. A fourth wants to see if algae and fungi in the closed systems can be grown on agar in a petri dish in pure culture.

I tell my young researchers that they can offer the 'paper' on their studies as 25 to 33 per cent on the semester's mark and that they will be marked not only by me but also by the class after the seminar each has to conduct. I warn them that the project involves work after school and I recommend lots of reading. This kind of operational approach requires extensive facilities such as fairly sophisticated equipment and spare laboratory space. It also makes demands on the time of the supervising teacher even though most youngsters require little control.

To Sum Up

I am only one teacher involved with bright children. I am certainly not the only teacher with ideas, many perhaps beyond my 'station.' There are hundreds of us patiently working. Some of us suffer frustration but all of us, I am sure, feel the effort, the time, is worth it. Bright children can be very demanding but the challenge is exciting. Through *Orbit,* I make an appeal to all the other teachers of bright children in elementary schools, in secondary schools to pool our resources and share our knowledge and experiences. Perhaps the first stage is for teachers in this field to join ABC since it is, after all, an association of parents and educators. Its regular newsletters and magazines can then be a vehicle of spreading the news as to what is going on. For at the moment we are scattered and working in isolation.

Parents in the association are anxious to know what is happening at the 'front,' at the classroom level, and want to know where it is happening. Let UTS, for the time being, be the clearing house for information. Write to me, at UTS, 371 Bloor Street West, Toronto and, if you have time, tell me what you are doing, what the school is doing, what the board is doing. I have a feeling that the relatively few teachers working with bright children will be joined, soon, by many others. For interest is growing.

Notes:

1. Dr. James Gallagher, Professor of Education, University of North Carolina and author of *Teaching the Gifted Child* (Boston: Allyn and Bacon, 1975).
2. J.P. Guilford and P.R. Merrifield, 'The Structure of the Intellectual Model,' monograph no. 24, Reports from Psychological Laboratory, University of California.
3. J.J. Gallagher, *Teaching the Gifted Child,* 2nd ed. (Boston: Allyn and Bacon, 1975).

WANTED

Gifted Teachers for Gifted Kids

Sandra M. Shiner
President, Association for Bright Children

There is a want ad which every parent of a gifted student would like to see. It runs something like this:

'Wanted: Teachers to excite, enrich, and expand the learning experiences of gifted and talented children in our school system, from kindergarten through university.'

Qualifications (What we need from you)

A knowledge of the characteristics of gifted students. Gifted and talented students exist in 3–5 per cent of our school population. We are thinking not only of the kids who have high intellectual aptitude, but also of those who exhibit exceptional promise in specific academic studies, creative thinking, social leadership, the visual or performing arts, and psychomotor skills.

These are the students you might think of as your 'model kids.' They could also be your very quiet kid, your obstreperous kid, your inattentive or 'lazy' kid, and even your drop-out. If you take the time to scratch the surface in a one-to-one chat, you will usually find these students verbal, inquisitive, persistent, impatient with surface analysis; good readers; interested and interesting; and very concerned about your needs as well as their own. Many of them have a lively and sophisticated sense of humor; they appreciate making and taking good jokes, more of the sophisticated satire variety than the slapstick buffoon type.

In many ways, though, these kids are just kids. They can show the same maddening inconsistency, 'immature behavior,' fear of failure, and need to be accepted that all other kids (and, yes, even adults) show.

A sincere and excited interest in learning. If you are a teacher who has been teaching the same lessons out of the same textbooks for twenty years, forget this job! Some students appreciate the comfort of a well-established routine. Bright kids do not. They love to learn and are fast to spot the phony teacher—the person who tries to pass off dead material with no concern for its current relevancy or for the many other ways kids have today for getting information, especially TV and slick, digestible magazines. Not that bright kids want a three-ring circus, constant gimmicks, or fancy materials. But they do need and appreciate true scholars—people who are keen on what they know and want to know more.

If you are constantly dissatisfied with the way things went last year, find yourself always searching for ways to make the old lesson plans come alive for you and your students; are always on the lookout for new books, films, people, and techniques to keep you and your learners involved, then this job is for you. And you will find that bright kids will often come up with as many good ideas for improving the curriculum as you do. (Really smart teachers even have the students sharing the teaching load. They can put on stimulating seminars and lively debates.)

A strong self-concept about yourself as a person and as a learner. If you feel that gifted kids tend to be snobby upstarts who need to be taught humility, compassion, and how to get along with others, stay where you are. We need teachers who think highly of their own abilities, who get a thrill from sharing their own talents and from developing the apparent and hidden talents of others. (All devotees of Maslow's Theory of Self-Actualization, and Gardner's policies of Excellence and Self-Renewal, please apply.)

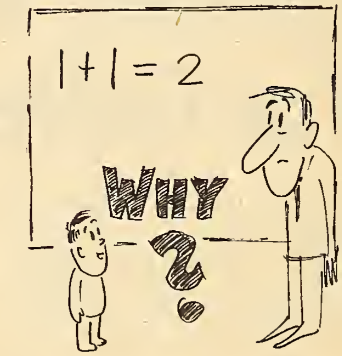
A sense of humor and boundless energy. Gifted children will take you on and wear you out, both physically and mentally. Some of their suggestions will be loony, wildly improbable, and even scary. Your workload will be heavy: you search for new materials as they fast gobble up your old ideas, and you try to keep up with the length of their completed projects. For example, three eleven-year-olds recently completed a project on Indians, which took them beyond the textbook confines of wigwams and fur trade routes, to an in-depth examination of the past and present problem of Indian identity. Their search took them out of the regular classroom and into six months of independent study. They contacted federal and provincial government sources, Indian cultural outlets, university professors, the media, the bookstores, and one harassed parent who had volunteered to aid and abet their activities. Their finished project encompassed three full binders of copy and illustrations totalling over 200 pages, taped interviews, and a roused sense of indignation and concern at the political inequities and social problems of current Indian affairs.

Job Benefits (What you can except from us.)

Salary. Oops, sorry, folks. This will probably be one of those altruistic situations where your return will be in spiritual rather than monetary gains. In other words, you will get as much as any good teacher gets, but will have the added incentives of knowing that your special teaching attributes are being used by those who need and appreciate them most. Also, you are indeed saving souls. Many gifted kids never realize their potential because they never had the teacher to put the finger on them, draw them out, and give them courage to risk being their own different selves.

Community Assistance. If you're daring and imaginative, a whole world of experts exists in the business, academic, theatrical, professional, and volunteer scenes, who can lend their expertise to lighten your load. Bright kids need and love to learn from the very best models which their areas of interest can produce. (Young hockey buffs get the chance to watch their ideal models perform for them publicly; but young science inventors rarely do.)

Public Support. Meagre. You won't be much loved by all. Be prepared for slurs of 'elitism,' 'egghead lovers,' and 'brain factory operators.' On the other hand, parents of gifted kids will be grateful and so will the kids themselves.



How Do We Find the Gifted Kids?
We'll all work together. Psychologists, parents, teachers, and the kids themselves can use a wide variety of techniques to identify the apparent and not-so-apparent candidates.

Why Bother?
We can no longer comfortably assume that gifted kids, left on their own, will automatically rise to the top, like the cream in milk. A recent survey in the United States clearly showed that gifted children were neglected and undereducated. This Office of Education report stressed that gifted students cannot ordinarily excel without assistance; they can suffer psychological damage and permanent impairment of the abilities to function well if they do not receive appropriate guidance. The federal study also showed, however, that services provided specifically to gifted and talented children can and do produce significant and measurable positive outcomes.

How Do We Get a Program Started?
If you are interested, run to your nearest director of education, supervisor of curriculum, director of special education, board of education, interested principal, or parent body, and ask: *What are we doing for our gifted kids? Why aren't we doing more?*

OF MANY THINGS

German Language School Beats Saturday Morning Competition

Each week at Grand River Collegiate and Crestview Public School, Kitchener, about a thousand students and adults ignore the temptations of weekend hockey, television cartoons, and other distractions to improve their knowledge of the German language.

Funded by the Ministry of Education in the same way as Night School courses, the German school charges no fee for admission; and for three hours each Saturday morning, the students and their teachers (over forty of them) explore German, not merely through grammatical work and language use, but through a study of German customs, culture, art, and history.

The Waterloo County Board of Education's German School has grown in leaps and bounds since 1973, when the Board assumed responsibility for the administration of the school. Previously, it had been affiliated directly with Kitchener's Concordia Club, with which it still maintains very close ties.

The students, who cover the spectrum from kindergarten to grade 13 as well as a couple of adult classes, spend about 50 per cent of their time on constructive language, 10 per cent on German history, 10 per cent on geography and, in the senior level, the rest on biology and the natural sciences. As principal Dr. Herminio Schmidt points out, the aim of the program is to improve basic speaking, writing, and comprehensive skills through studying other subject areas.

While students do not yet earn high school credit for the courses taken, the program ties in closely with the German language studies offered in elementary school and up to grade 12 in the secondary school. Grade 9 students, for example, who attend the school can subsequently jump a year when they come to study German at regular school. The major convenience the school offers is its beginning classes for any age group or level.

The entire program, according to the principal, fits beautifully into Canada's commitment to multiculturalism. 'When the students come to learn the language, they also develop a much deeper understanding of another culture, and about the contributions this culture has made to Canadian society, particularly here in Waterloo county. We feel this is important.'

OSSTF Resource Booklets

Two new Resource Booklets have been produced by the Professional Development Committee of OSSTF.

Power or Pawn: Leadership and the Department Head examines the dichotomous role of the department head in secondary schools and, in particular, this aspect of leadership in the educational scene. The booklet is of obvious value to individuals holding departmental responsibility but also has application for vice-principals, aspiring department heads, principals, and senior administrative officials.

Motivation and Discipline (available in French only) is a new addition to OSSTF's line of French Resource Booklets. It examines the areas of motivation of students and makes practical suggestions for French language teachers in their dealings with student problems on a day-to-day basis.

Each booklet costs $3.00, and (together with others recently produced or reprinted) can be obtained from Resource Booklets, c/o OSSTF, 60 Mobile Drive, Toronto, Ontario, M4A 2P3.

International Education

In response to many teachers' requests, the Canadian International Development Agency (CIDA) has produced a multimedia kit to help illustrate international cooperation:

Reshaping the Future: Toward a New International Economic Order, produced for CIDA by the National Film Board, studies a growing demand by developing countries for a basic change in the world's economic system; at issue is a redistribution of wealth and a sharing of international power. *Reshaping the Future* examines problems related to a 'new international economic order' (sometimes abbreviated NIEO), which is a topic of current discussion in history and geography classes in secondary schools across Canada.

The multimedia kit, which retails for $32, includes two filmstrips (one with sound casette), a detailed teacher's handbook, student activity worksheets, UN literature, and a poster-size world map. Copies of the map, which are available either in English or French, provide information about the population, average individual income, average life expectancy, and main exports of each nation, and can be obtained free in any quantity from CIDA. For more detail, contact CIDA, Information Division, 122 Bank Street, Ottawa, K1A 0G4 or telephone 613-995-6214.

Two newsletters, *Development Education: Education for a Global Community* and *Understanding,* contain valuable information about the international scene, and are available free to teachers. To be put on the mailing list for *Development Education,* write to K. F. Prueter, International Education (S1212), OISE, 252 Bloor West, Toronto, Ontario, M5S 1V6; and for *Understanding* (which focusses on East Asia), write to the Education Liaison Programme, Joint Centre on Modern East Asia, 14213 Robarts Library, University of Toronto, Toronto, Ontario, M5S 1A5.

Good News: Students Saving Taxpayers Money

Bryan Hayter

When a directive was passed down saying 'practice conservation,' the message was heard at Centre Wellington District High School (CWDHS). As a result Mr. average taxpayer reaped the benefits.

The savings haven't been calculated in dollars but an energy management team at CWDHS reduced the cost of heat and light in that school during the first six months of 1977.

The team, consisting of students, a teacher and a member of the custodial staff, searched for excessive uses of energy and reduced the consumption in each case. Reductions from Jan. 1 to June 30, 1977 included 14,531 gallons of heavy oil for hot water and heating boilers, 14,503 gallons of light oil for steam heating, and 86,478 kilowatt-hours of electricity.

Teacher Jim Dandy, head of the school's geography department, said that he felt some of these figures were a bit optimistic, but noted that the project did 'save a lot of money for taxpayers.' Mr. Dandy explained the project last week in a between-class interview. He said that a letter from the county director of education had deplored the growing utility budget and stressed the need to save money by lowering energy consumption.

A logical starting point was Mr. Dandy's grade 13 Geography class—Aspects of Canadian Problems. Energy conservation is one unit of that course and it was therefore possible to devote a considerable amount of time to the project.

Because there were no recommended guidelines with the original directive, a team was formed and its work began in what Mr. Dandy calls 'the obvious areas'—light and heat. A light metre was soon acquired and this was used to reduce the light in classrooms and halls to lower, but still acceptable standards. 'We must have taken hundreds of neon tubes out', Mr. Dandy notes.

The management team's year-end report continues the story: 'All teachers were asked to report on the light used and number of students in their room over a period of one week. Room temperatures were reduced to the lowest level consistent with reasonable . . .comfort.'

A further facet of conservation program was a one-day seminar held at CWDHS for students from secondary schools throughout the county. Engineers from Ontario Hydro offered professional advice about further steps that could be taken by the schools. The report of the team members — students Frank Chamberlain, Debbie Flewwelling, Doug Jack, and Arlene Martin plus Mr. Dandy and custodian Norm Smith—also offered further recommendations. Singled out for future attention were: single-glazed windows, poor door closures, ivy covering windows, and heat registers located between inner and outer doors. The group also recommended that more light reflective paint be used in future; that heat exchangers be used in the school exhaust system; and that drapes be drawn across windows at night in rooms so equipped.

At the beginning of the current school year a new energy management team was formed—new student members being Brenda Bouwman, Tina de Groot, Jeff Scott, and Mike Van Rees.

(Reprinted from *The Fergus-Elora News Express*)

The Principal's Performance Scale: An Informal Method of Evaluating Principals

Larry P. Regan, Principal
St. Bernadette School, London

Principal's Name: ____________________

School: ____________________

Date: ____________________

Name of Evaluator: ____________________

Place letter indicating most appropriate description in blank beside each numbered item.

1. Establishing School Goals and Objectives ____________
   a. Sets goals co-operatively with staff, community and students.
   b. Talks a lot about the need for a set of school goals.
   c. Uses a neighboring school's set of goals.
   d. Thinks MBO is a British sports car.
   e. Thinks a goal is what Guy Lefleur scores so often.
2. Program Development ____________
   a. Assures the continuing development of an appropriate curriculum design in each area of study.
   b. Ensures that every second student has copies of basal texts.
   c. Sends for all complimentary material from book companies.
   d. Uses old 'grey book' as curriculum guide.
   e. Stores all Ministry of Education curriculum circulars in chronological order.
3. Student Management ____________
   a. Knows the student body well and has their respect and co-operation.
   b. Realizes that he would have no job without the students.
   c. Knows the starting members of the school's championship basketball team.
   d. Knows the children of the Chairperson of the Home and School Association.
   e. Once drove a sick child home.
4. Decision Making ____________
   a. Establishes a decision making system in which community representatives, staff and students are active participants.
   b. Talks emphatically about the need for more 'feedback' and 'input.'
   c. Shares his decisions in memos to all concerned.
   d. Thinks all decisions are precipitate.
   e. Keeps all decisions to himself.
5. Support for Instruction and Learning
   a. Develops a system of faculty performance which is clearly understood by those evaluated and those to whom evaluation reports are sent.
   b. 'Visits' classrooms whenever superintendent is spotted in the parking lot.
   c. Sneaks peeks into classrooms when going down corridor.
   d. Attends all class parties where food is available.
   e. Seen once this year by staff, coming out of washroom with a copy of the Financial Post in hand.
6. Professional Leadership ____________
   a. Participates on committees and in appropriate professional organizations.
   b. Chaired the Principals' Spring Dance Committee.
   c. Goes to a conference (any conference) in Toronto at least once a year.
   d. Plays poker with a group of educators once a week.
   e. Joined the Teachers' Credit Union.
7. Scholarship ____________
   a. Is knowledgeable about current research.
   b. Keeps copies of latest journals (in plastic covers) on coffee table in his office.
   c. Knows a principal who is doing some research.
   d. Thinks all research is dangerous to mental health.
   e. Thinks research is checking the want ads in the Globe & Mail each spring.
8. School–Community Relations ______
   a. Consults with parents and community members regarding practices and operations.
   b. Sends home a school newsletter on a regular basis.
   c. Introduces the acts at the Christmas Concert.
   d. Thinks inquisitive parents should mind their own business.
   e. Has successfully avoided all parents for a year and a half.

9. Innovation and Change ____________
   a. Seeks to apply new ideas and information where appropriate.
   b. Reads about change.
   c. Wears a different suit to school every three months.
   d. Thinks a ‘change agent’ is one of those machines at airports and train stations.
   e. Venerates a small bust of Egerton Ryerson.
10. Organizational Climate ____________
   a. Creates and maintains a warm humane environment, supportive of teaching and learning.
   b. Never yells at anybody in public.
   c. Requires staff salute each morning.
   d. Checks classroom thermometers every day.
   e. Thinks it’s getting colder every year.

Weight as follows: a=5, b=4, c=3, d=2, e=1
Total points and divide by 10 for average score.

______Total Score

______Average Score

Meanings of average scores:
5=Excellent Principal; should be in line for supervisory officer position.
4 to 5=This principal is doing very well; has a solid future.
3 to 4=Principal is hanging in there; might consider taking some specialized courses in spare time.
2 to 3=Principal should check if there are any Principal Effectiveness Training Courses; should also answer any book company ads for salesman.
1 to 2=Principal should immediately join the teachers’ baseball team and attend all Federation business meetings and social functions regularly. He might also look into the home tutoring business.

Writing Incorporated

York University has introduced a unique First Year Writing Project to teach writing skills to approximately 2,000 students in twelve Social Science and Humanities courses.

Director of the program, Judith Humphrey, has developed a set of five lessons that will be presented by fifty-three instructors within their regular classes. This subject-related approach to writing consists of lessons that avoid the more conventional emphasis on abstract rules of grammar. They move from larger to smaller units of meaning, from the overall thesis to the paragraph to the sentence.

A pilot study conducted last year suggests that this approach is effective. The added benefits are that no additional faculty or undergraduate courses are required.

For further information, contact the program director, c/o The Writing Workshop, York University, Room S713 Ross Building, 4700 Keele Street, Downsview, Ontario, M3J 1P3.

Suggestions for the Primary Teacher: Book Reports

William S. O’Bruba
Bloomsburg State College, Pennsylvania

The primary teacher who is seeking to stimulate student interest in reading may find novel approaches to book reporting a useful resource. The following suggestions will serve as a beginning. They are varied, feature activities and ‘props’ that appeal to children, and adapt easily to different situations. Try to run the gamut of them but, insofar as possible, let the children choose their own activities. Suggest that your students, instead of presenting traditional book reports:

- Present brief reports as songs and sing them to well-known tunes. (Arrange private auditions and tape the better ones for class presentation.)
- Act out the story with hand puppets or a ‘character doll’ speaking through ventriloquism.
- Compare two books written or illustrated by the same person.
- Describe a book character in detail so other students may draw his picture. When they have finished, compare their drawings with a picture from the book to check the clarity of the description.
- Write a letter to a friend suggesting that he read a certain book. Describe it in an interesting way that will make it appeal to him.
- Demonstrate something learned from a ‘how-to-do-it’ book. Construct a model, make something from a recipe, conduct an experiment.
- Rewrite an interesting story in simple language so that younger children may read and enjoy it.
- Dramatize and tape a report for an imaginary radio program. (Again, the teacher may wish to arrange a private audition before the report is taped.)
- Dress as a character from a book and, speaking as that character; tell the class about your life. Use incidents from the book as a basis for the presentation.
- Make a map showing the location of scenes described in the book. Or, if the book is historical, prepare a timetable of events.
- Draw pictures of characters in the book and make up a photograph album.
- Create mobiles of story characters, using two- or three-dimensional figures.
- Model character figures from clay or carve them from soft wood or a bar of soap.
- Design costumes for the main characters of the book. Present them as sketches or make them up from pieces of cloth, scraps of paper, bits of yard or ribbon and display them on paper or clothespin dolls.
- Make a poster advertisement for the book, featuring a short description and illustrations. Remember that is is intended to ‘sell'' the book and make it colorful and interesting.
- Create a diorama based on the book or certain scenes from it, and featuring papier-mâché figures.
- Make a list of new or interesting words learned from the book. Share it with interested classmates. Add to it as you read other books.

- Make a miniature float, representative of the book or scenes from it, and mount it on an inverted shoe box.
- Make a descriptive collage, using large poster paper as a background for pictures cut from newspapers, magazines, or catalogues and combined with words from the story.
- Tell the story through ballet or modern interpretive dance.
- Dramatize a scene from the book, with the help of one or two classmates if necessary; present the story in mime, or interpret the title through charades.
- Make a flyer containing an outline of the story and featuring a colorful picture of an incident from it on the cover. (The teacher may set up a file for flyers and keep it in a convenient place so that students may refer to it when they are looking for books to read.)

Sound Reasoning

Sheila Sloan
Rideau Valley Middle School

Who knows the resources found in the school library, the family of schools, and the community better than the school librarian? Such knowledge puts a teacher/librarian in a unique position to guide teachers in producing practical, but enriched, curriculum units.

Now, more than ever, teacher/librarians are required to facilitate the development of local curriculum. As always, quality education requires careful preparation, but with class size increasing, specialist teachers being removed, and excessive demands being placed on the school administration staff, teacher/librarians are in the most opportune position to influence and suggest innovation and development of both local and regular curricula.

Teacher/librarians are specialist teachers and if they are to survive the drastic guillotine on education, they must change the image and concept of their role. The opportunity for leadership in curriculum is beckoning them; it cannot be passed by.

If the librarian cooperates with teachers when ordering materials, duplication is eliminated and the best resources can be made available. Preplanning and discussion with teachers can expand the initial teacher outline to offer a wider, richer curriculum unit that will suit the interests, varied levels, and individual needs of all students.

The librarian's involvement in the teaching process gives satisfaction to more students as well as to the harried teacher. Obvious pressures such as covering the whole unit with minimal resources by one person is eliminated. Pupil-teacher ratio is enhanced because there is an extra teacher on the team. Gifted students can pursue further interests, while those with learning disabilities can receive the attention they require.

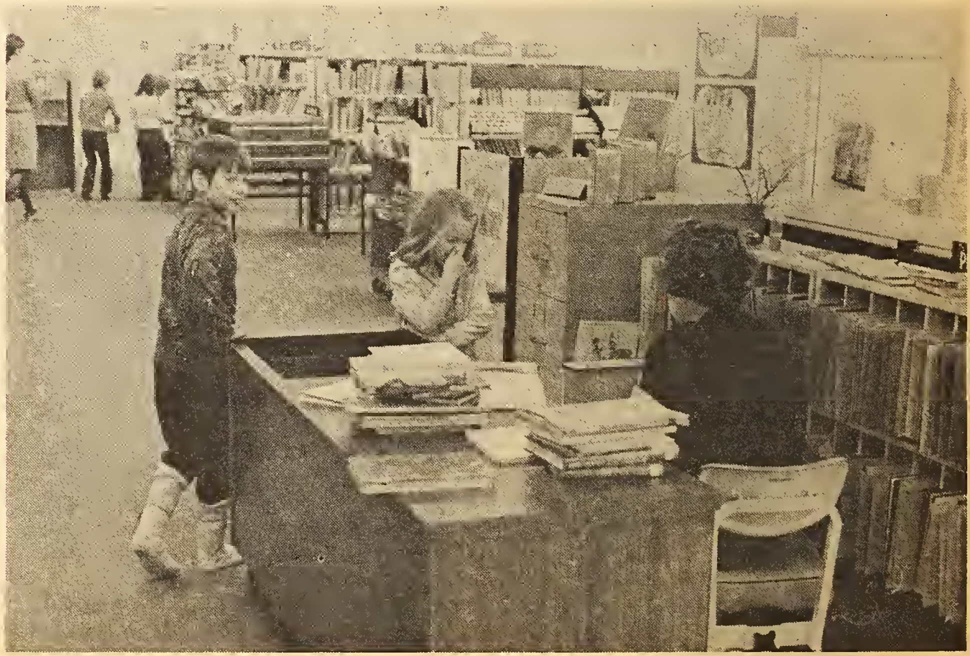
To achieve this ideal, cooperative team planning must occur—librarians must be part of that team. Open communication, confidence, and trust must be the team's foundation. Teachers and librarians must treat one another as equally competent partners in the teaching game.

Easier said than done? There are times when one believes this is true. Yet if teacher/librarians find themselves in schools where the libraries are used as baby sitting services and the resources rarely, they should take the bull by the horns. Prepare a few activity cards of assignments along with a bibliography. Mathematics teachers are usually most receptive to extra material to keep the keen, eager, always-finished-first mathematicians busy. Offer to teach a novel study, reading, or poetry unit if that happens to be your 'forte.' These lend themselves well to the library. If such projects are set up properly, students can work on their own while you circulate, supervise, and assist other student activities in the library. A fun novel I used with a group of grade eight superachievers was *Watership Down,* by Richard Adams. The 'anti-feminism' in this book created much debate.

No matter in what area of the curriculum, teacher/librarians can take the initiative. Simply jump in with both feet! In this way remedial or enriched units can be developed. Suppose Canadiana or local history is to be taught. Canadian legends, novels, biographies, history, and geography materials are abundant in most school libraries. Magazines, paperbacks, pamphlets, books, filmstrips, tapes, slides, and so on, covering a multitude of Canadian topics, are readily attainable. And every community has its local historians who are only too willing to talk about the 'good ol' days.'

How do you find time for all these activities? Put the technical aspects of running the library in the background. Students love the responsibility of managing the desk routines—and do the job well. Make the most of your parent volunteers. I'm not advocating that librarians totally neglect administration, only that they set up the routines and delegate so that their time is their own to get on with the real job of teacher/librarian—curriculum planner and teacher.

Teacher/librarians cannot afford to let this golden opportunity slip by. If they do, students and teachers alike will suffer. Only if teacher/librarians accept this challenge will the schools be better able to respond to the special needs and characteristics of students and make quality education a reality in Ontario schools.



Media Kit from Ma Bell

A multimedia program on telephone communications called 'Hello! Getting Together with the Telephone,' is available to elementary schools.

The kit was designed for Canadian school children from kindergarten to grade 6, and includes four sound filmstrips, each with teachers' guides, posters, and activity sheets in English or French.

Developed for Bell Canada and produced with the help of educationists, the kit has been tested with many groups of children in classrooms. It may be purchased at a cost of $79 from:

International Cinemedia Center Ltd.
Suite 401, 49 Bathurst Street
Toronto, M5V 2P2. (Telephone
(416) 361 0016)

The main theme of telephone communications helps to reinforce important concepts in a number of learning areas. Understanding and using an everyday instrument such as the phone provides a familiar example of language arts and social studies in action.

An objective of the Hello! program is to help young people to use the telephone skilfully and effectively. This knowledge helps students develop poise and self-confidence which is important to them as they progress through school. Practising what to say and how to speak on the phone can help children develop skills related to many other areas of their lives both in and out of school—for example, handling various kinds of speaking situations and understanding another person's point of view.

By learning to use the telephone directory, students not only gain access to a convenient reference source but also develop valuable skills needed for completing reference assignments. Looking up a number draws on several important skills including spelling, categorizing, labelling, and use of the alphabet.

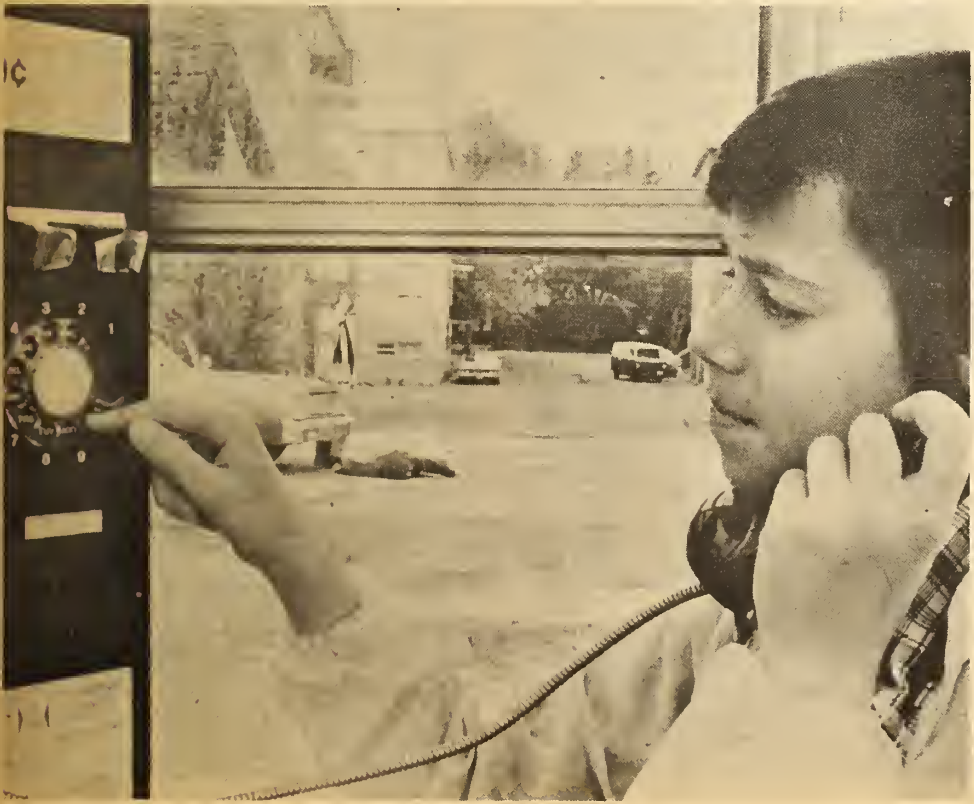
One of the four parts of the program, 'Getting Together' is suitable for all grades. It explores communications and demonstrates how phone conversation has become an essential part of life. Many behind-the-scenes people—the repair man, operator, and research engineer are introduced.

'Now You're Talking' is suitable for kindergarten to grade 2 children and uses cartoon characters to introduce the basics of telephone techniques including what to do in an emergency.

'What's White and Yellow and Read All Over,' gives step-by-step advice on using directories.

For grades 4–6 students, 'Hello, Mr. Bell,' introduces the history of communications and a detailed explanation of how the telephone works. The filmstrip begins with the inventor's initial idea of 'telegraphing speech' through hand-cranked phones, automatic switching centres, direct distance dialing, to circuit chips and fibre optics.

The script for each filmstrip is reprinted in the teacher's guide and additional background information is provided to support the photographs and text.



Mes impressions personnelles sur l'enseignement personnalisé

Ghislaine Reid
Faculté d'Education, Université d'Ottawa

'L'enseignement individualisé peut seul tenir compte des différences d'intelligence entre enfants d'une même classe, des différences d'aptitudes chez un même individu, de son rythme de travail et des variations de celui-ci, de ses réactions affectives, de sa fatigabilité, de tous les facteurs personnels qui interviennent dans son activité et dans son comportement scolaire.' Dottrens, cité par Monique Le Gall dans un article en Psychopédagogie.

On dit de l'enseignement personnalisé qu'il est la condamnation de l'enseignement collectif et magistral. Basé sur les principes d'Edouard Séguin, de Maria Montessori, de Jean Piaget (apprentissages successifs), l'enseignement personnalisé vise le développement individualisé de la personne et conduit l'enfant à une plus grande autonomie. L'ambiance de la classe en est une de calme, d'ordre, et de tranquillité. Le matériel est scientifiquement préparé et la salle de classe bien organisée. Le milieu scolaire est pensé en fonction de l'élève, l'ameublement est conçu en fonction de l'usage du matériel disponible, les manuels sont différents plutôt qu'en séries de 28 ou 30. Comme le maître n'est plus le seul dispensateur de l'information à acquérir, il sert de guide, de personne-contrôle, de lien entre l'enfant et les parents. L'enfant apprend à apprendre, ses besoins passent en premier lieu dans l'organisation de son apprentissage. Il n'est plus en compétition avec ses pairs; il est surtout en compétition avec lui-même. Il ne subit pas d'échec puisqu'il n'y a pas d'examen; il recommence un travail jusqu'à ce qu'il maîtrise le concept en question. L'évaluation est alors faite de son travail non comparé à celui de son voisin. Il travaille ainsi à son rythme personnel et non pas au rythme d'un copain plus intelligent ou d'un autre plus lent, une situation qui a pour résultat d'éliminer certaines frustrations. Il a un choix d'activités la majeure partie du temps car il n'est pas isolé de ses copains comme semblent le croire certains critiques de la méthode. Il y a, chaque jour, à trois ou quatre reprises, des périodes appelées "mises en commun", particulièrement en catéchèse, en étude du milieu, en expression corporelle et une mise en commun générale organisée à tour de rôle par les élèves: récitation d'un poème, résumé d'un livre lu, problème de mathématiques, chant et le reste. La récréation est aussi un moment de détente physique et de mise en commun sociale.

Il me faut réfuter ici certaines remarques négatives souvent faites par des personnes qui ont fait une visite-éclair dans une classe à enseignement personnalisé. D'ailleurs, les pédagogues mentionnés au début ont passé par des situations semblables: critiques mal fondées, remarques désobligeantes, toute la gamme de commentaires faits par des pseudo-experts. Il faut passer beaucoup de temps, *s'asseoir sans parler près* des enfants qui travaillent, observer longuement et judicieusement avant de pouvoir se former une opinion personnelle de la méthode. Les enseignants qui appliquent cette méthode, étant aussi humains que les autres enseignants, peuvent parfois commettre des erreurs humaines: erreur pédagogique, erreur de jugement. Doit-on pour cela nier la valeur de la philosophie de base de cette méthode alors qu'on ne juge pas l'enseignement traditionel en général à partir d'un cours magistral ennuyant?

1. Certains diront que cet enseignement est très mécanisé, que le travail par fiches n'offre pas de contact humain, que le maître devient exclusivement un technicien, un correcteur. Il pourrait sembler que c'est vrai si on ne visite une classe que pour dix minutes. Par contre, si on observe longuement, on verra l'enseignant qui corrige faire un commentaire personnel à l'enfant, lui poser une question, lui donner un peu d'attention personnelle. Dans une classe traditionnelle, a-t-on le temps chaque jour de parler personnellement à chaque enfant, de lui poser des questions à chaque leçon, ou de l'avoir près de soi pour quelques secondes plusieurs fois par jour? Pas souvent! C'est l'enseignant qui humanise l'apprentissage, pas le matériel!

2. D'autres se demandent si l'enfant développe suffisamment ses habiletés linguistiques orales. Il peut lire à haute voix ou réciter un poème, soit durant une mise en commun, soit devant un autre élève, soit sur cassette. Devrait-il lire chaque jour à haute voix pendant que les 29 autres élèves écoutent? S'il lit bien, passe encore, plusieurs en profitent; mais s'il lit mal, avec hésitation, sans confiance en lui-même, l'expérience de lire, surtout en se tenant debout bien droit, devant un groupe nombreux, peut être traumatisante et le faire régresser plutôt que s'améliorer. Devrait-il mémoriser le même poème que tous les autres élèves de la même classe? Ou pis encore, l'écrire de mémoire, encore avec toute la classe, pour fins d'examens? Mieux vaut choisir soi-même un poème qu'on aime pour le mémoriser et le réciter à un ou deux copains ou à tout le groupe.

3. "On semble les passer tous dans le même moule, par le même matériel didactique," me dit un autre critique.

Qu'est-ce qu'on fait dans une classe traditionnelle? On a une série de manuels tous pareils, un enseignant qui essaie, dans une leçon collective, d'atteindre l'esprit de trente élèves de calibres variés, un devoir au siège ou à la maison qui est le même pour tous, lent, moyen, surdoué; et enfin, un examen général pour toute la classe; dans certains cas, on annoncera à tous les résultats de chacun. Dans l'enseignement personnalisé, le matériel didactique est là, dans la classe, disponible à tous, mais les élèves n'utiliseront pas tout le matériel—et celui qu'un élève emploie aujourd'hui variera de celui qu'emploie son voisin. L'enfant plus avancé peut faire cette semaine un travail que son voisin de classe ne sera prêt à faire que dans quatre ou six mois. Un autre peut faire les problèmes de mathématiques de sa fiche en quarante minutes même si son voisin n'avait pris que vingt minutes pour faire le même travail. Doit-on honnêtement demander à celui qui a pris quarante minutes de se dépêcher, souvent, aux dépens de la compréhension? Même un excellent enseignant ne pourra hâter, ni "faire sauter", les étapes d'apprentissages successifs dont parle Piaget. Peu importe la méthode employée, on apprend à son rythme personnel.

4. Sans examens généraux, quels bulletins peut-on envoyer aux parents? Un rapport hebdomadaire sur les activités de la semaine de l'enfant, rapport que signeront et commenteront les parents, l'enseignant, et non le moindre, l'enfant. L'enfant détermine, par contrat personnel, quelle somme de travail il se propose d'abattre pendant la semaine. Ce qu'il fera en réalité sera comparé à ce qu'il s'était proposé de faire. Il pourra y avoir parfois des raisons très valables pour expliquer un rendement moindre que celui prévu. C'est à l'enfant à fournir les explications nécessaires, soit au maître, soit au directeur, soit aux parents, soit quelque fois à un comité formé de ces personnes, auxquelles on peut, à l'occasion, ajouter le pyschologue scolaire, la garde-malade. Il y a aussi, à quelques reprises annuelles, une autre forme de bulletin. En tout temps, les parents peuvent venir à l'école, consulter par téléphone une personne responsable, et souvent, visiter la classe de son enfant.

5. "C'est une méthode pour enfants de quartiers économiquement désavantagés—les meilleurs élèves profiteraient plus de l'enseignement traditionnel", me dit une autre personne. C'est une assertion absolument erronée. Comme la méthode Montessori, qui a fait ses preuves en Europe et en Amérique, une méthode dont profitent les enfants de quartiers à forte proportion de logis à prix modique devrait être doublement profitable à ceux des quartiers considérés plus huppés. Maria Montessori employait sa méthode, au début de ce siècle-ci, avec des enfants de logis philanthropiques et avec des enfants anormaux. *Résultat:* ceux que la société se plaisait à classifier "d'idiots" réussirent aux examens de l'Etat aussi bien, et dans certains cas mieux, que les enfants dit normaux. Pourquoi? Elle croyait fermement dans le développement du *potentiel* de l'enfant et prétendait que le système traditionnel ne développait ce potentiel que·partiellement. Aujourd'hui, au Canada, les écoles montessoriennes reçoivent surtout les enfants de la classe économiquement privilégiée, ceux qui peuvent se permettre les hauts frais de scolarité. Pourquoi critiquerait-on un système subventionné par les deniers publics qui offrirait les mêmes avantages, la même methode, un matériel semblable? Dans un quartier comme dans l'autre, la performance académique variera d'un quotient intellectuel à l'autre.

6. Enfin, certains semblent penser qu'on ne peut être heureux si on travaille dans l'ordre et dans le calme! Pourtant, la psychologie enfantine nous apprend que l'enfant a besoin d'ordre: qu'il a besoin, tout jeune, de retrouver les choses à leur place habituelle, pour qu'il se sente en sécurité. Cette sensibilité à l'ordre existe chez l'enfant: pourquoi s'apitoyer sur son sort si l'école essaie de développer chez lui des habitudes sécurisantes? Préfère-t-on l'excitation et le désordre extérieurs qui produiront un désordre intérieur et une agitation physique et mentale? La brochure "*Les années de formation*" (Ministère de l'Ontario) nous recommande pourtant de faire acquérir à l'enfant les attitudes et les habitudes fondamentales indispensables à son épanouissement. On peut s'épanouir dans le calme et l'ordre et la sécurité!

L'enfant ne sera jamais libre tant qu'il n'est pas indépendant; et sa liberté est toujours limitée par la liberté des autres et est étroitement liée à la responsabilité.

Je crois fermement que l'enseignement personnalisé l'entraîne à travailler avec responsabilité, à accomplir une tâche jusqu'au bout, à devenir responsable de son propre progrès académique, à comprendre et à expliquer son comportement, à acquérir les connaissances de base et à stimuler son épanouissement. Et dans cette forme d'enseignement comme dans toute autre, le maître restera toujours le facteur le plus important dans l'enseignement. Que son rôle soit différent, entendu! Qu'il ne soit qu'un technicien, faux! Il demeure toujours l'agent principal, l'agent humanisateur, de l'organisation pédagogique.

Le français—mais pas sans peine!

Depuis les débuts d'ORBIT il y a huit ans, nous avons toujours inclus dans ce périodique un article en français. Nous sommes entièrement redevables à Dormer Ellis de l'OISE, non seulement de sa contribution personnelle importante, mais du zèle dont elle a fait preuve en persuadant les personnes rencontrées au cours de ses déplacements dans la province, de nous écrire des articles en français. Pour autant que je me souvienne, personne ne nous a jamais envoyé spontanément de tels articles.

Cependant, le professeur Ellis commence à épuiser ses "nouveaux" contacts et le but de cet entrefilet est d'en appeler à la communauté franco-ontarienne travaillant dans le secteur pédagogique. Nous avons grand besoin de sa collaboration. Il y va de l'avenir de la présence francophone dans chaque publication d'ORBIT! Alors à vos plumes . . .

Nous recherchons d'ordinaire des articles de 1000 à 3000 mots qui intéressent particulièrement les enseignants franco-ontariens et les administrateurs pédagogiques. Nous acceptons bien sûr toute illustration accompagnant le texte.

Nous vous remercions vivement à l'avance de votre participation. Vos propositions sont à adresser au rédacteur d'ORBIT, Institut d'Etudes Pédagogiques de l'Ontario (OISE), 252 ouest, rue Bloor, Toronto, Ontario M5S 1V6.

Local Curriculum Development in Ontario: State of the Art

David Pratt
Faculty of Education, Queen's University

Nineteen seventy-six was the year in which political speech writers learned the word curriculum. This was true not only in Ontario, but also in Britain, many American states, and other provinces of Canada. The message, broadcast by politicians, editorial writers, chambers of commerce, and university mandarins, was similar everywhere: centralization, standardization, and a move "back to the basics" were essential to fight a rising tide of educational frills, Mickey-Mouse programs, and student illiteracy.

In Ontario, the message carried a special poignancy. In 1972 the Ministry of Education announced its intention of transferring primary responsibility for curriculum decision-making from the province to the individual schools. For school personnel, the next few years were filled with frustrations. Equipped with neither resources nor expertise, curriculum committees throughout the province floundered in a disorder so discouraging that a number of school boards and teacher organizations publicly petitioned the Minister to resume control of curriculum.

Then, after three years of trial and error, light began to appear at the end of the tunnel. School boards started to assume the initiative in curriculum development, providing teachers with time and support for curriculum work, and appointing competent individuals to full-time curriculum responsibilities. Boards developed structures and procedures which experience had shown to be practicable for development and implementation of curricula. Universities inaugurated and expanded graduate and inservice programs in curriculum. The hope that every school in the province would contain at least one teacher trained in curriculum was close to a reality by 1977. Finally, in various boards and in one subject area at a time, new curricula began to emerge which were outstandingly superior to any the province had previously seen.

It was at this point that the minority government, facing an imminent election, announced that local curriculum design had proved a failure, and would be replaced by a return to central prescription. (At least, this was the message received by the public; insofar as government spokesmen did acknowledge and support the successful curriculum work at the local level, this was little noted by the media.) With much fanfare, the pronouncements were accompanied by the establishment of central curriculum teams to develop standard guidelines in core subjects, which were to accomplish in a matter of weeks what it had taken the most successful boards years to achieve.

All of this was somewhat discouraging to the local personnel who had fought against heavy odds for recognition of curriculum development as a local priority. Some gave up. Rather more decided to wait and see. The most resolute ignored the change of policy. In the event, the last group was vindicated. It was widely believed that the policy change had been made not by the Curriculum Branch in the Ministry, but by the cabinet and the Conservative caucus. Ministry personnel, though obliged to defend the policy in public, were by no means unanimously enthusiastic. The political nature of the whole episode was tacitly acknowledged by the government. Once the provincial election in early June 1977 had reconfirmed the political status quo, the Ministry of Education quickly dusted off and reissued an old memorandum of 1975, which emphasized the importance of local curriculum initiative (Ontario Ministry of Education, 1977). And the provincial curriculum guidelines, when they were published, proved so vague and permissive that they would not only allow but require local interpretation and development.

It was against this background, at the end of June 1977, that eighty key curriculum personnel from across Ontario met at a two-day Invitational Conference on Curriculum Design at Queen's University. The participants included superintendents, coordinators, consultants, principals, department heads, classroom teachers, community college and university faculty, and Ministry curriculum officers. Twenty-eight Ontario school boards were represented. The common denominator among the participants was that the great majority of them had received training in the previous five years in Systematic Curriculum Design provided through the Graduate and Continuing Education offices of the Faculty of Education at Queen's University. The participants represented a cross-section of the most motivated, committed, and productive curriculum workers from the Ontario school system.

What Are the Basics?

The purpose of the conference was to share experiences and ideas regarding the systematic development and implementation of curricula. The format was almost wholly one of panel discussions, with short prepared presentations by three or four individuals followed by general discussion. Concurrent scheduling of panels allowed a total of seventeen sessions to take place over two days. The small numbers involved, the existing network of acquaintanceships, and the fact that the conference had been given zero publicity produced discussion marked by candor and informality.

In this atmosphere, participants did not hesitate to raise basic issues. One of the questions that arose frequently during the conference was the one which Herbert Spencer asked more than a century ago: What knowledge is of most worth? Or, in contemporary parlance, What are the basics?

A feeling was apparent that such a question was essentially a moral and philosophical issue which could not be fully determined by formal or empirical methods, but that a serious effort had rarely been made to achieve consensus among educators and the public, or even among educators at different levels. An art consultant suggested that while literacy and numeracy were critical functions of the left hemisphere of the brain, the right-brain basics were the perceptions of pattern and form which were developed by art, music, and manipulation of material objects. Another speaker made a related point, that the basics included not only knowledge and skills, but also experiences of basic significance in the lives of children and adolescents, including social and aesthetic experiences such as travel, leadership, and the performing arts. A teacher cited the extensive research showing that future employment was a basic motivation for most postsecondary students, who experienced a traumatic sense of betrayal when, after university graduation, they found themselves unemployed or underemployed. A further perspective was provided by a Ministry consultant, who reminded the conference that the most significant influences on human development occurred outside the school, and that the greatest social need was to develop effective caring families for the child's first three years.

A number of panelists criticized curriculum practices and policies for being retrospective. The needs of the future, it was felt, should take precedence over those of the past; and they were for creative, problem-solving, adaptable, compassionate people; people who used computers in preference to smashing them; people who were in control of their environment rather than victims of technology, commerce, or ideology.

The methods by which curriculum priorities could be determined received attention. Needs assessment was recognized as an important phase in curriculum design. One secondary school principal reported that his school conducted a survey among five hundred families in its community regarding perceived purposes of schooling, and used the results as the foundation of its curriculum development. Teachers appeared to welcome diagnostic tests as a valid and non-threatening way of identifying student needs. There was a good deal of discussion of teacher input in needs assessment. Some boards had developed standard procedures for obtaining input from teachers, and it was noted that this was an important strategy for building teacher support for the curricula which were developed. However, one superintendent cautioned that if teachers were asked what they wanted in curricula, they would tend to recommend only what they were familiar with.

Structures for Local Curriculum Decision-Making

Diversity was the characteristic of local curriculum development structures described by participants. Different speakers identified different key personnel in the curriculum process. In some boards, the role of the director was critical; in others, the director delegated almost total responsibility for curriculum to one or more superintendents. Some jurisdictions regarded the principals as the key link in curriculum between the central office and the schools, but in others the coordinators assumed this role. In more than one board, by design or default, major responsibility for curriculum initiative devolved upon the department heads; much could be done by a department head who modelled successful curriculum development and challenged his colleagues to experiment with curriculum innovation. Still other jurisdictions were experiencing success with Special Assignment Teachers: classroom teachers who were given full-time curriculum responsibility for a fixed term of one or two years, after which they returned to the classroom. This was perceived as preferable to the loss of contact that could result from appointment to a permanent non-teaching position.

Clear identification of curriculum roles and responsibilities was important. There was some agreement that it was optimal for a superintendent to be charged with responsibility for curriculum within a jurisdiction. This was almost essential if adequate resources for board-wide curriculum development were to be assured. The superintendent was also well placed to facilitate communication among teachers, board personnel, and special interest groups within the community.

Despite organizational diversity, a number of key features distinguished those boards which were most productive in curriculum design. One was the early and continuous use of classroom teachers on curriculum writing teams. The teachers were typically drawn from both elementary and secondary schools, and often found themselves discussing common curriculum issues across divisional levels for the first time. An important first step in the process was to establish a comfortable social climate among team members, and with this intent a full day or weekend retreat had been used successfully. Once selected, the curriculum development team had to be given a wide measure of control over its work, including the responsibility of determining what constituted the curriculum core.

Another common feature was the development of written guidelines for curriculum designers. These often took the form of a manual of curriculum planning procedures. Such manuals — those produced by the Halton, Peel, Simcoe, and Waterloo boards were notable examples — served to establish clear definition of terms and a common set of assumptions and strategies among curriculum workers. In some cases, a second handbook was produced showing stages, roles, and responsibilities in curriculum decision-making in a board. The considerable effort expended on production of such documents in a number of boards appeared to reap commensurate benefits. One of the tasks of the senior curriculum officer was to ensure that the development team followed the agreed procedures, and stayed within a negotiated time schedule. The schedule had to be realistic, recognizing that the time from needs assessment to implementation would rarely be less than two years.

A number of participants in the conference came from schools in boards which had not yet developed a major curriculum initiative. In such circumstances the role of the principal was crucial. There was general agreement that the major tasks of the principal with regard to curriculum were (1) to provide the resources, time, and climate to facilitate curriculum development by teachers; (2) to challenge teachers to review and revise their curricula; and (3) to safeguard students' welfare by monitoring the curricula which teachers produced. The principal had to maintain a balance between stimulus and security; he was going too fast if teachers perceived curriculum design as a risk. Principals emphasized the importance of personal example. One secondary principal assumed responsibility for teaching one course each year, and developed model curricula in the courses he taught. Another provided an example of goal setting by proposing and inviting comment on aims and objectives for the school, and of monitoring by having teachers evaluate his own performance as principal. The key questions principals should ask teachers, a participant suggested, were: What are you trying to do? How are you doing it? and How do you know when you are accomplishing it? A principal who had achieved success with this model in his school after about five years of endeavor warned of the extreme frustration that can be expected for the first two years in which a principal attempts to move a traditional staff toward an outcome orientation.

Curriculum Development and Teacher Development

There was wide agreement with the assertion of one of the community college administrators that "there can be no curriculum development without professional development." The need for effective inservice training in curriculum was recognized as acute. A Ministry survey showed that in 1973 less than 30 per cent of Ontario teachers had any experience of curriculum design (Reisman, Robinson, and Peranson, 1973). Those responsible for inservice training saw the necessity to make good the deficiencies of preservice teacher training, which had traditionally given teachers little exposure to knowledge and skills in curriculum design or in related areas such as measurement and evaluation. Discussion focussed mainly on motivational and organizational strategies for teacher involvement.

Some disillusion had occurred among teachers, as well as the public, regarding conventional one-shot professional development programs. In addition, decision-making in this area had become unwieldy as a result of an excess of people making decisions about professional development. Job security was not a sufficient motive for teachers to involve themselves either in inservice or in curriculum development work. As one superintendent put it, such pressures made the teacher a survival specialist rather than a curriculum expert. Coercion was generally viewed as counter-productive; the first rule was that professional development had to be voluntary.

A range of professional and personal development opportunities was provided by boards. Sabbatical leaves, workshops, intervisitations, and minicourses had all been used effectively. Some boards had experienced success with series of evening workshops over a period of weeks, designed for a specific audience. While some boards used outside specialists to run courses and workshops, this did not appear to be essential; both superintendents and consultants had delivered inservice training successfully. One coordinator who viewed professional development of teachers in his field as his major role estimated that 70 per cent of teachers involved learned and applied 80 per cent of the ideas he presented. He commented that "spending the time to improve teacher skills in curriculum design is a long process—but absolutely necessary if more rational curricula are to be implemented." He and a number of his counterparts in other boards had developed materials for inservice courses in curriculum design which, in some cases, approached the form of textbooks on curriculum planning.

Strategies for motivating teachers to become involved in curriculum development also received considerable discussion. In some places, paying an honorarium to teachers to work on curriculum teams over a summer had been successful. More boards provided release time to teachers, negotiated through their principals, to work on curriculum development. However, a number of participants pointed out that teachers were not particularly strongly motivated by release time, as it tended to throw their teaching off schedule. Recognition of good work by teachers was valuable. A personal letter from the superintendent went a long way. Favorable notice at board meetings, which would be reported by the media, was also effective. More than one board had found an effective strategy in calling evening meetings of curriculum teams, providing dinner, and allowing the team to work without time constraints. According to one superintendent, this "worked like a rigged slot machine." Once the team was working, the role of the administrator was to provide resources and moral support, and keep the work on schedule; in the absence of deadlines, the job tended to expand indefinitely.

Provided the curriculum development team had enough expertise to be productive, the experience of curriculum design was itself an important professional development experience. In fact, in the experience of some discussants, it was possible to include one sceptical teacher on each curriculum team, with a "conversion" rate of about 90 per cent.

Implementation: The Great Barrier Reef

Participants in the conference viewed implementation as the major obstacle in curriculum change; indeed, it was at this point more than any other that promising curricula were likely to sink without trace. Once a new curriculum was developed, it was no longer a question of motivating a small number of curriculum workers, but one of enlisting the cooperation or active support of the rank and file of teachers, administrators, and elected officials. If, as one coordinator proposed, implementation should be defined in terms of performance rather than process—a curriculum could be regarded as successfully implemented when 90 per cent of the students were achieving 90 per cent of the objectives—the time from inception to implementation could be five to ten years.

Several boards devoted considerable effort to communication with parents and public on curriculum issues. Public meetings were held, and statements of goals and priorities sent to parents; in some cases, polished audiovisual presentations on new curricula were made to parent groups. A superintendent reported that a spellbinding one-hour presentation to the board by a

teacher from the curriculum team had on one occasion overcome all the obstacles to a particular curriculum innovation.

Some teachers found themselves ahead of their superiors; their concern was with obtaining approval for innovation from principals. One department head suggested that it was generally best to innovate first and seek approval after the reform was a fait accompli. Teachers could sometimes educate a principal by persistently reporting on their objectives and performance criteria and submitting evidence of student attainment. Innovative curricula based on a mastery learning model, though often welcomed by students and parents, tended to conflict with concepts of normal grade distribution maintained by principals. Participants felt that it was important to arm teachers with the arguments they could use to persuade principals of the validity of high expectations and achievement by students.

The major problem in implementation, however, was seen as one of persuading classroom teachers to use new curricula developed at the board level. Many boards had spent considerable time and money developing excellent curricula, which were then expensively printed and bound and distributed to teachers, only to be placed, immediately and for ever, in the bottom drawer of the teachers' desks.

It was possible to infer from the discussion on this issue that there was a continuum of teacher attitudes toward curriculum change. There were first *the enthusiasts* (perhaps 5 per cent of teachers), who had been closely involved with the design of the change or were eager to adopt it. Next came *the supporters* (25 per cent), who were quickly persuaded of the value of the innovation. Then a large middle group, *the acquiescers* (40 per cent), who would adopt a change as soon as resistance became onerous. *The laggards* (25 per cent) would hold out as long as possible, while *the antagonists* (5 per cent) would actively attempt to sabotage the innovation. A strategy for innovation had to be designed to work progressively along the continuum.

Peer influence seemed to be the best initial strategy. In addition to the original developers, it was ideal to have one credible and influential teacher in each school who could be persuaded to adopt the new curriculum. This was preferably a teacher who had previously had positive experience of curriculum innovation. Curricula which elicited highly favorable student response tended to be most rapidly "talked up" by teachers among their colleagues. Moral and material support had to be provided to teachers who adopted the innovation; it was particularly important to provide back-up expertise, advice, and trouble-shooting to prevent small difficulties from snowballing to the point where an entire program was rejected.

By such means, a "critical mass" of teachers could be won over to the innovation. Others would then begin to see the writing on the wall and adapt to the change. The major instrument for persuading the uncommitted seemed to be external evaluation. Clear specification of expectations in terms of pupil performance, of criteria for assessment, and of a time-line setting out target dates for the collection of data, even when viewed as manipulative by school personnel, often had the desired effect. It seemed that it was only when external appraisal of student achievement became a real probability that those teachers who were holding out would be forced to abandon their illusions regarding the policymakers' seriousness of intent. Once assessment became operational, it provided feedback to teachers, which helped to maintain and improve the program.

By this stage, the laggards could be fairly well isolated and surrounded by teachers (or schools) favorable to the new curriculum. When a sizeable majority of teachers had adopted the innovation, explicit directives and/or sanctions could be introduced to persuade the remainder. It was not clear whether it was possible, or even necessary, to achieve total conformity of all teachers with a curriculum innovation.

A Cautious Optimism

While many problems and obstacles to local curriculum development were recognized by those in attendance, the conference ended on a note of optimism. It was clear that among teachers and administrators in Ontario schools there was a widespread willingness to consider curriculum innovations on their merits and, if convinced, to devote time and energy to their implementation. Considerable advances had been made in the previous five years in curriculum design procedures. A common curriculum language was developing; programs were increasingly being designed on the basis of agreed learning outcomes; criterion-referenced testing was gaining wider acceptance; and individual teachers, schools, and boards were moving toward a mastery model of curriculum.

The diversity of models for curriculum development and installation, inservice training, and program evaluation suggested that each jurisdiction needed to find its own best structures and strategies. While there was much that an individual principal, department head, or teacher could achieve unilaterally, the local board seemed to be the optimal unit to combine interpersonal effectiveness with organizational efficiency. Those boards appeared to have achieved most in which a superintendent was responsible for and committed to curriculum development, and was assisted by a number of like-minded full-time curriculum coordinators or consultants. But provided that the structure that emerged defined roles and practices clearly, and that ultimate responsibility for curriculum was explicitly assigned, widely differing structures appeared to work effectively.

Participants in the conference sensed the beginning of a change from a reactive to a proactive mood. "Forward to fundamentals" was proposed as a less regressive slogan than "back to basics." There was a feeling that the politicization of curriculum had run its course, and that despite economic and political constraints, the expertise and the will existed to develop curricula more attuned to the future needs of pupils and of society. The developing confidence among curriculum workers meant that it was no longer necessary to maintain past practice of unquestioningly introducing curriculum changes simply because they had been adopted in Britain or the United States. Unrecognized by the public, unthanked by the politicians, and with negative help from the media, individual boards and schools and individual administrators and teachers are bringing local curriculum design to a degree of maturity that augurs well for the future.

Note:

The author acknowledges the contribution of the curriculum designers from schools, boards, and Ministry offices across Ontario who met at the First Invitational Conference on Curriculum Design at Queen's University in June 1977, on whose ideas this article is based.

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Dyslexia:

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Dyslexia: a disturbance of the ability to read. (From Webster's New Collegiate Dictionary, eighth in series.)

We read with our ears. The voice can only reproduce what the ear hears. A child may be dyslexic before he ever encounters the written word. Reading is not a matter of decoding symbols. The right ear must monitor speech.

These are some of the findings of Dr. A. A. Tomatis of Paris. They may seem strange at first hearing, but they are the result of many years of research and clinical verification. In the past twenty-five years, Dr. Tomatis has treated more than 15,000 dyslexics and has established eighty centres in Europe and Africa.

The problem of dyslexia was hardly known in the last generation. Today, it is running rampant and is said to affect the lives of more than half the population. As interest grows, so do attempts to understand and correct the problem. Currently, there is very little agreement as to the causes, remedy, and even the very nature of dyslexia. On one point at least, agreement has been reached. The problem stems from several causes, and they range from the psychological to the physiological.

Who Is Dyslexic?

The dyslexic child is one who has difficulties in reading that are incompatible with his intellectual potential. In a great number of cases, dyslexia goes undiagnosed, especially in bright children who still manage to get by in school at the average or below-average level, but not usually at the failure level. However, this average level is way below their endowment capabilities and, if unchecked, will result in a dissatisfied and frustrated adult whose education and occupation will never match his potential.

Most children camouflage their disabilities through compensatory behaviors. Some of these may 'dislike' only one area of academics; others become socialites; still others find 'success' in art or sports as compensation. However, many dyslexics find the struggle too hard and simply fail.

In both cases, that of the bright child as well as the less gifted, the common result is that they don't like school, they hate learning, and they are unable to put forth effort and to concentrate. They are usually labelled 'lazy' by uninformed educators and parents, and 'stupid' by their peers. These negative reactions from those around them result in a poor self-image and attendant behavior problems. The dyslexic lives in a world of frustration on all fronts.

How We Read

To understand dyslexia, one must understand the act of reading itself. Reading is not a mechanical process of decoding symbols. The child is not naming letters when he is reading, but rather, he is listening to his own voice (whether he is reading aloud or silently). He knows what the word sounds like and he 'hears' and then 'feels' what he reads. This is why Dr. Tomatis says that we read with our ears.

If we look for a moment at the process of writing, it may clarify the role of the ear in reading. To be able to write is to be able to record the letter signs. A written sign in itself is a coded sound that must be reinvested with that sound to be understood. This can be compared to a tape recorder. Writing is a method of storing sound for later reproduction and is comparable to the tape itself. The reader's eyes are the 'start' button that sets the process in motion. The ear, then, is the microphone which is plugged into the tape recorder, and finally, the sound comes out of the speaker—i.e., the apparatus of phonation. The nervous system integrates the information conveyed by the auditory microphone and deposits it in memory engrams. In this analogy, it is the ear (microphone) that plays the central role.

This may be further clarified if we distinguish the threefold role of audition. First of all, *hearing* is a purely sensorial act which is not connected to any conscious experience. Second, there is the act of *listening,* which implies underlying intentionality (willfulness). The third stage is *integration,* which requires conscious involvement. To be able to integrate, one must have the ability to reproduce at will a sequence of meaningful sounds and to employ them deliberately.

The important word here is listening. There are none so deaf as those who will not listen. We have to *want* to listen. And when we read, we are listening to what someone (the author) has to say to us. The author engages the reader in conversation. Reading, then, is essentially *communicating*, and no one communicates unless he wants to.

Communication

The desire to communicate is acquired *in utero.* The expectant mother communicates with the fetus in many ways. She protects him, nourishes him, and reveals herself to him as he experiences her emotional states. The fetus is bathed in the sounds of her organs and, most especially, the sound of her voice. After birth, the infant remains symbiotically tied to his mother and to her voice, and he communicates only with her. It is his mother who understands his cries, his babbling, and his

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baby talk.

But as the infant grows older, his horizons widen and he encounters someone other than his mother, usually his father. To communicate with father, he must drop the secret code that served between mother and himself and learn conventional language — his first new language. Any difficulty the child encounters in relating to father will have a repercussion on his acquisition of language. These difficulties can result from a distant or threatening aspect of the father himself, or from an unbroken symbiotic tie with the mother.

A child who experiences rejection will stop listening. People will be nothing more than a part of the world of objects since no personal relationships have been established. And since he does not listen, he does not integrate and therefore does not communicate. All of this is a result of the lack of satisfactory maturation in the child's relational attitude toward others.

In the dyslexic child who does not listen, it is not a question of hearing acuity. He has perfectly good ears, but is 'deaf' to the directed voice of his mother or his teacher.

Most dyslexic children are somewhat egocentric. They do not move outside of themselves toward the 'other.' They may also be impulsive or frightened, even to the point of being concerned about their very survival. Such children must overcome their preoccupation with their own visceral needs before they can be interested in those around them.

When school starts, these children may be able to do certain tasks, but they cannot listen, identify words, or concentrate on their meaning—so learning disabilities appear in school. They are a consequence of the child's general lack of readiness to learn that has been building since crib days. The child was dyslexic before ever encountering the written word.

With the realization that the causes of dyslexia are primarily psychological rather than intellectual, it becomes apparent that the remedial reading techniques usually employed will not succeed in overcoming the problem. These usually make use of one-to-one situations (to minimize the dyslexic's great distractibility), a great deal of drill (in the hope that frequent repetition will lead to integration), and the teaching of any number of 'tricks' to help dyslexics remember rules that have little meaning for them. Older dyslexics often know more tricks than many teachers. If, however, the desire to communicate is awakened and such children are taught to *listen*, not just to *hear*, then tricks will no longer be needed. They will understand and remember rules as well as anyone.

In treating the dyslexic, it is important to realize the psychological basis of the problem. Treatment requires instilling in the child the desire to communicate and the ability to listen. As a result of Dr. Tomatis's experiments with audio-vocal feedback and filtered sounds, he developed in 1954 a cybernetic device known as the 'Electronic Ear,' which remains the central tool for treating dyslexia. To understand the Electronic Ear and its use in treating dyslexia, it may be helpful to take a brief look at some of Dr. Tomatis's discoveries that led to its development.

Tomatis's Findings

Dr. Tomatis began his career as an ear, nose, and throat specialist. In 1946, he was appointed director of the Acoustic Laboratory at the Aviation Depot in Paris, where he was to test workers for hearing loss caused by exposure to the noise of the new jet engines. It was here that he gained his first insight into the psychology of hearing. At first, the men were afraid of losing their jobs if their audiograms showed a hearing loss. Later, the government introduced workmen's compensation. On retesting the men, Dr. Tomatis discovered that the same worker could *honestly* hear as much as 30 decibels higher when hearing loss might cost him his job than he did when hearing loss might bring him government compensation. In other words, *wanting* to hear can improve hearing acuity.

Meanwhile, in his private practice, Dr. Tomatis was working with opera singers who were experiencing difficulty singing in tune in the higher ranges. He discovered that these singers showed the same hearing loss on their audiograms as did the workers at the Depot. Measuring the intensity of their singing voices, he found that it reached a level of 135 decibels in their heads—the same intensity as that of a jet on the ground. Because they couldn't hear at a certain frequency range, neither could they sing in tune in that range.

Dr. Tomatis next used a spectrum analyser to produce a picture of the frequencies of the singer's spoken voice. He found that his spectrogram reproduced exactly the same frequency pattern as his audiogram. This clinical discovery of the intimate relation between audition and phonation led to further studies, which were carried out at the Sorbonne. These studies verified Dr. Tomatis's findings and, in 1957, the Academy of Science and the Academy of Medicine officially recognized his discovery that *the voice can reproduce only what the ear hears,* and named it the 'Tomatis Effect.'

Armed with this knowledge, Dr. Tomatis started working with amplifiers and frequency filters which enabled him to detect, via voice analysis, the true hearing capabilities of the workers at the Depot. He inserted filters between the microphone and the earphones and talked casually to the subject. If he found the voice picture showed frequencies up to 6,000 or 8,000 hertz, he knew that, despite any protest, the subject was not deaf.

He also found that when he filtered out the low frequency sounds, the listener's frequency range rose perceptibly. Using this as a treatment technique, he was able to retrieve the hearing losses suffered by the singers he had under his care.

Tomatis's next discovery came from working with a singer who also stuttered. He found that all stutterers have a dominant left ear. On the other hand, all great voices, whether sung or spoken, are found in those who have a dominant right ear. In treating children with speech difficulties, Dr. Tomatis found that if he put earphones on them and increased the sound they heard through their right ears, not only did they speak better, but they also spoke more eagerly, their behavior improved, and so did their reading ability. This was his first clue to the fact that we read with the ear, and that not only speech and reading but also all other scholastic endeavors improve dramatically with lateralization of listening to the right.

It is now known that the left hemisphere of the brain is the centre of symbolic thought and language and, since the right ear is the most direct route to this centre, the most efficient analysis of language requires that the right ear be the directing ear. If the left ear leads, it must make use of a longer, less efficient route. When neither ear consistenly leads, we find the phenomenon of reversals. For example, in the word *saw,* if the 's' is 'heard' by the left ear and the 'w' is 'heard' by the right, the 'w' will reach the left hemisphere before the 's' does and the child will read *was.*

In the treatment of dyslexia, most therapies centre on the eyes. Therapists are usually aware of the problem of 'crossed dominance' and try to determine which eye is the leading eye, which hand does the child use, and do these match. The role of the leading ear has gone unnoticed.

As Dr. Tomatis began to see positive results in helping children with speech and reading difficulties, his interest in the problem of dyslexia grew. It soon became his major concern as he realized how little was known about the problem and how baffling it was to educators. It was at this stage that he began developing the Electronic Ear and its treatment program.

Treatment of Dyslexia

The first stage of the Electronic Ear program concerns itself with the child's need to be 'born' into the world of communication. Through a filtering technique which he has developed, Dr. Tomatis has been able to approximate the sound heard by the fetus in the womb. The sounds of his mother's voice which he heard through the amniotic fluid contained only the highest frequencies of her voice. This filtered mother's voice is heard by the child (through earphones and a tape recorder) in a non-threatening environment. It has a calming effect on the child and helps him forget any affective traumas he may have suffered in the womb. He is then given a 'sonic birth': as the child listens to his mother's highly filtered voice, gradually the entire spectrum of her voice is put back until he hears her normal voice. A successful sonic birth will release the child from his prenatal attachment to his mother.

The next stage of treatment involves retraining the child's mode of listening. This part of the treatment is based on the Tomatis Effect (the voice can only reproduce what the ear hears). The child's voice will reflect any gaps in what his ear hears. Listening to his own voice talking normally, he will be unable to detect that anything is missing. However, under the Electronic Ear, the child listens to his voice as it would be heard by an ear that has no gaps in it and then as he himself hears it. The electronically controlled alternation of these two modes of listening brings the child to an awareness of the difference between the two modes of phonation and, through practice, the exercise enables the ear to acquire and maintain the proper listening mode.

A lack of desire to communicate may cause a child with perfectly acute hearing to shut off his ear in the area of the spoken word. As a result, he either does not hear or is unable to analyse those sounds laden with meaning. He listens instead to the low frequency sounds of his environment. The words that the child listens to at this stage of treatment are also filtered to remove the low frequencies, forcing the child to concentrate on the sounds which pertain to language. The more filtered the word is, the more the child must concentrate in order to reproduce it. As the child works at hearing these words, he is re-educated in the attitude of listening.

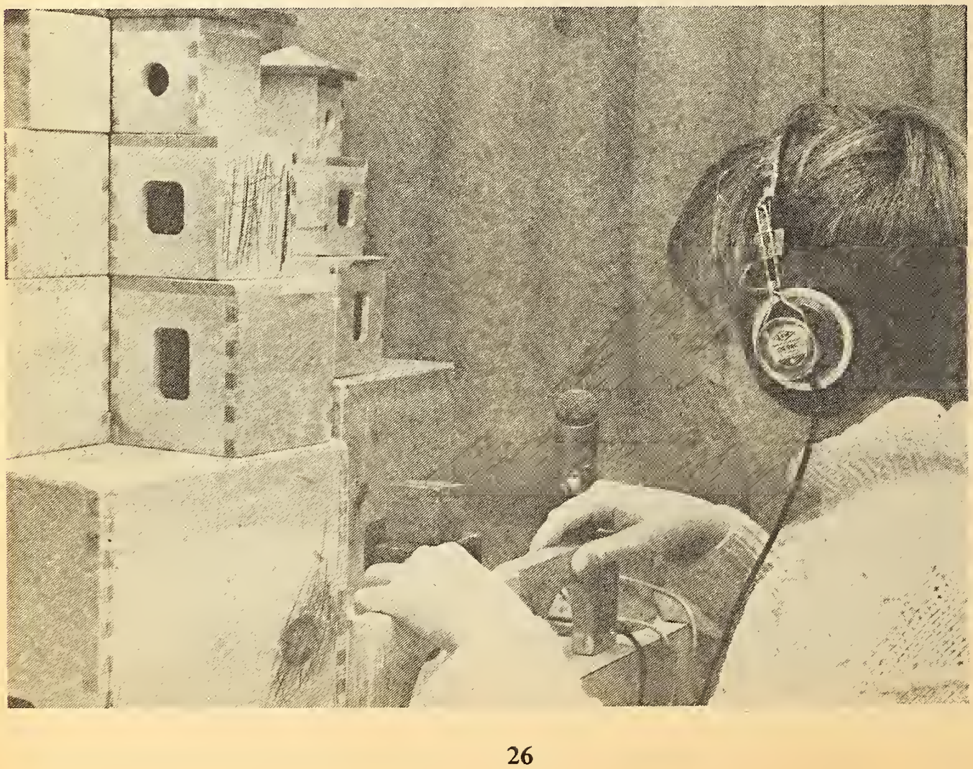
During alternate sessions on the Electronic Ear, the child listens to highly filtered music, especially the music of Mozart. These high frequency sounds help to stimulate the cortex which must constantly be 'charged' like a battery. The dyslexic whose sonogram indicates that his voice lacks high frequencies is in need of recharging. It is only an alert, sensorially well-nourished brain that is able to plan, to project from within, to concentrate upon and to analyse the complex phonetic units that are a part of language acquisition.

The final job of the Electronic Ear program is to ensure lateralization. At all times, more sound is fed into the right ear than the left so that right-ear dominance is strengthened. As the ear becomes lateralized, so does the rest of the motor and psychic functions.

This, then, is the basic outline of Dr. Tomatis's approach to the treatment of dyslexia. Until recently, Electronic Ear therapy was only available in three centres in Canada: the Child Study Centre of the University of Ottawa, the Toronto Montessori Schools, and Le Centre d'Education Auditive in Montreal. However, Dr. Tomatis has decided to help set up more centres on this continent. Last November, he gave seminars in Ottawa and Montreal to train technicians to carry out Electronic Ear therapy.

Now an international conference has been organized to acquaint North American parents, teachers, psychologists, and doctors with his theories. This conference, entitled 'Listening: The Road to Learning,' will be held at the Royal York Hotel in Toronto from May 4th to 7th, 1978. Further information may be obtained by writing to:

Listening: The Road to Learning
8569 Bayview Avenue
Thornhill, Ontario.



Canada Post

Canada Post produces a kit for teachers that is both a resource book and catalogue of other free material and services available to schools. The kit and items reviewed below may be obtained from the nearest regional Public Affairs Branch of Canada Post. Provinces other than Ontario will find addresses listed in their local telephone directory under 'Government – Post Offices, Public Affairs.' The postal codes for Public Affairs Branches within Ontario are listed below.

Toronto M5J 1A5 (Telephone: (416) 369-3935)
Hamilton, L8N 2B0
North Bay, P1B 1G6
London, N5Y 1A3
Windsor, N9A 4H0
Ottawa, K1A 0C1

However, before you order a copy of the catalogue, please check that your school library does not have one already.

TEACHING AIDS CATALOGUE (THE KIT)
The resource section traces the history of the Canadian postal service from its first official mail courier, a canoeist, to its present-day mechanized sorting system. The postal code is deciphered with the aid of charts and pictures.

In the catalogue section the following services are offered:

Speakers
Schools may invite Canada Post employees, ranging from Branch Managers to Letter Carriers to, speak on topics such as:
Stamp production
Stamp collecting
General Post Office history
Postal code
Letter carriers
Mail processing operations
MAPP: Mechanized Post Office
New services.

Tours
Kindergarten to grade 8 students may visit postal stations; secondary grades may tour mechanized plants. It is recommended that teachers make arrangements well in advance.

Post Office Week
Canada Post will help teachers to plan and set up a classroom project. Again, arrangements should be made well in advance.

Exhibits
The following lightweight, easily assembled display units may be borrowed free of charge. Telephone The Exhibits Co-ordinator (416) 369-3935.

Canadian Transportation
Measures 15 ft. by 10 ft. The development of various Canadian transportation systems is commemorated in stamps.

Postal Standard
Measures approx. 12 ft. by 10 ft. An exhibit for secretarial and business students.

Postal Pointers
Measures 12 ft. by 10 ft. This display stresses the importance of using the postal code.

PROMOTIONAL ITEMS
The following are in limited supply and will be distributed on a first-come first-served basis.

Pencils
'My Postal Code is — —."

Mini-Wallets
Suitable for high school students and up. There is room on the front to place your postal code and room inside for identification and credit cards.

Postal Code Litter Bags
Suitable for all ages.

PUBLICATIONS

Brochures (Bilingual)
Mail through 5,000 Years
From Wampum to Postal Code
Stamp One . . . to Now
Rate Sheets
Goods on the Go
Don't Flunk the L.S.M.

Fact Sheets (Bilingual)
Recommended by Canada Post as essential for secondary school students studying the Post Office.
The Postal Family of Services
Behind the Postal Code
The Standard Answer
The Perfect Parcel
National Postal Museum
Canada's Postal Network

SLIDES
A Country and Its Stamps (suitable for high school and above)
Certified Mail (suitable for high school and above)
Anatomy of ANA NAN (with sound) (suitable for high school and above)
The Fun of Stamps (suitable for elementary schools, grades 5–8)
Postal Parable (with sound) (suitable for elementary schools)

FILMS
A variety of 16 mm and 35 mm films are available free of charge to Ontario schools. Borrower pays return mail only. Requests require at least two weeks for processing. Film titles are listed in the teachers' kit and should be ordered from:

Canada Post Film Library
376 Wellington Street West
Toronto, Ontario M5V 1E3
Telephone (416) 869-1633.

Would-be-borrowers from other provinces should check with their local Public Affairs Branch of Canada Post.

Profile of a School/43

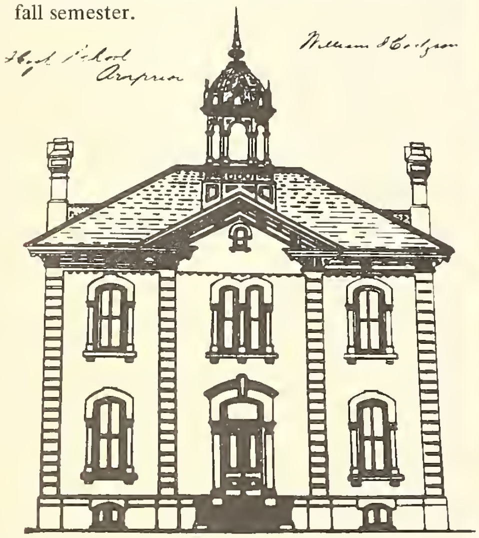
Arnprior District High School

Arnprior District High School is located in the Ottawa Valley where the Madawaska River joins the Ottawa. The school is a meeting-and-mingling place for students of Renfrew, Lanark, and Carleton counties.

Arnprior District High School is the oldest in the valley. Secondary education began in the town in 1865, but it was not until 1876 that a permanent building was erected on the present site. As the area developed, the enrolment grew from thirty students to more than twelve hundred. As a result there have been nine major additions and alterations between 1911 and 1975. Each addition was put on the north end of the building, creating one of the longest central corridors in an Ontario high school.

In 1976 the school celebrated the centennial of the first permanent high school building. It was a year filled with reunions, concerts, banquets, and centennial projects, including a special edition of the yearbook. The Government of Ontario presented a plaque in recognition of the event.

Unfortunately the festivities of 1976 were followed by two major fires during July and August 1977. Four classrooms, the administration offices, and the gymnatorium were completely gutted, while other areas were severely damaged. A massive clean-up was organized, renovations planned, and portable classrooms installed so that the school opened on time for the fall semester.



The curriculum and activities have always reflected the needs and interests of the community. In addition to the basic courses, there are three courses perhaps unique in Ontario: Forestry, Aerial Photography Interpretation, and Industrial Physics. The large enrolment in the Environmental Science courses reflects the concern of students for the environment. The large greenhouse enables them to experiment with plant growth.

School functions receive a great deal of support from the community. Drama productions, band concerts, and sporting events, especially football games, draw large crowds. There are over twenty clubs which satisfy a wide scope of interests. With community support through advertising, the students publish a yearbook as well as a monthly newspaper.

Arnprior District High School *is* a meeting-and-mingling point. It is the place where students come for the common purpose of education and leave with much more.

Staff of ADHS Newspaper *'The Scoop'*

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